Institutiones Chirurgicæ:

OR

PRINCIPLES

OF

SURGERY,

Comprehending and Explaining the

GENERAL INTENTIONS

Of all the

Principal Branches of that SCIENCE,

Laid down in a

Regular and Methodical MANNER;

WITH

Proper DIRECTIONS and cautionary RULES intermixed, and suitable REMEDIES adapted to each particular Case.

To which is annexed, a

CHIRURGICAL DISPENSATORY,

Shewing how to prepare the most approv'd PRESCRIPTIONS, which have hitherto been brought into Practice; with a full Account of their Use and Manner of Operation. Fitted for the Use of young SURGEONS, APOTHECARIES, *&c.*

By *G. SMITH* of *Kendall*, Apothecary and Surgeon.

LONDON,

Printed for HENRY LINTOT, at the *Cross-Keys* against St. *Dunstan's* Church in *Fleetstreet*. MDCCXXXII.

MVSEVM
BRITAN
NICVM

4 Gg 1



THE PREFACE.

THE following Inſtitutions, which I here preſent the Reader, were firſt begun about fifteen Years ago, when I was employed in the Sea Service, though after a different Manner, being then drawn up in Form of a Diary or Journal, wherein I had inſerted particular Caſes, as they daily occurr'd to me in Practice, with ſuitable Remarks thereon. But thoſe Papers being loſt amongſt other Things of greater Moment, I could not proceed in that Method which I then intended, neither truly had I any Thoughts of ever

attempting any thing upon that Subject farther, till lately I met with the learned Hollerius's Inſtitutiones Chirurgicæ, *otherwiſe intituled,* De materia Chirurgica, *a Subject ſo uſeful for new Beginners, and eſpecially thoſe who have not regularly been educated in the Science, that at firſt I thought I could not do a better Service to the Publick, than by tranſlating them into* Engliſh. *But upon a more ſerious Peruſal, finding the Intentions every where cumbered with a Heap of Medicines, which render'd the Work not ſo uſeful and beneficial as otherwiſe might have been expected, I ſoon altered my Reſolution, and choſe rather to compile a Treatiſe wholly anew, and do it after my own Manner, than be at the Pains of tranſlating and altering a Book ſo confuſed and indigeſted. And thus the learned* Tagaultius, *tho' he corrected the Barbariſms of* Guido's *Language, thought the Correction of his Surgery too troubleſome an Undertaking; and therefore left it in the State he found it. But as both* Hollerius's

rius's *Work and* Tagaultius's *are difficult to be met with, I was thereby chiefly induced to set about the following Performance, hoping by this Means to compensate the Deficiency of the others: Though I have been so far from copying after them, that upon a slight Examination, the Reader will find me no more indebted to them than to any other Author I have quoted; except in the Form of classing the Intentions, in which I have followed* Hollerius, *so far as he has proceeded in a rational and regular Order; but where otherwise, I have taken the Liberty to dissent from him. And this is the only Acknowledgment I can make for his Assistance, though I look upon him a most judicious and learned Author. For throughout the Whole, I have had a strict Regard to the present Practice; while at the same Time I consulted the Opinions of several the most eminent and famed Practitioners both ancient and modern, and particularly* Galen, *the most illustrious of them all; who, however vilified by some par-*

ticular Men, is highly honoured and esteemed by others of far greater Account, who have beheld him as a Man raised up by God to bring Physick to its utmost Perfection. Thus Leo. Fuchsius *says of him, that he was not only most excellent in Medicine, but also a perfect Master of all other Sciences, and the best Interpreter of* Hippocrates, *as those excellent Monuments of sound Doctrine which he has left to Posterity do abundantly declare. Whence* Vallesius *gives this Encomium, That one* Galen *was to him better than a thousand Interpreters. For there is no Branch of Physick which he hath not taught in full Perfection; and though he lived fifteen hundred Years before us, saith this Author, there is nothing hitherto that hath been added (worthy of note) to his Inventions; for he left nothing belonging to the Constitution of the Art to be found out that Posterity could superadd thereto. Therefore it may truly be said of him, that his Perfection in the Way of Physick was such, that the Ages of Antiqui-*

ty (except Hippocrates) *could not produce his Equal; and in the ſucceeding, he will not be paralleled, if our Countryman Mr.* Gale *obſerve right, when he tells us, that this worthy Man* Galen *hath ſo excellently garniſh'd the Art of Medicine both in the practick and theorick Part, that, as our late Writers ſay, what he has done looks more like the Work of one inſpired by the Deity, than the Effect of humane Underſtanding; and concludes with this Remark, "That "whatſoever Seed hath been ſown a- "broad in the whole World, whether "by* Hippocrates *or other learned Men "before his Time, he hath gathered to- "gether, ſown in one plain Field, and "watered them with ſuch Diligence, that "they have ſo increaſed, that at this "Day the univerſal Earth hath recei- "ved Nouriſhment by them, perpetual "Commodity and Pleaſure; and he, "for his great Virtue and painful Tra- "vail, hath won unto himſelf immor- "tal Fame, which ſhall remain to the "World's End; ſo that no Envy, Ca-*

" lumny, or Oblivion, will ever be able " to obſcure it, but rather cauſe it to " ſhine the more, as long as ſound Doc- " trine, ſolid Learning, and a rational " Practice ſhall have Place." Thus far I thought myſelf obliged to introduce ſufficient Authorities to ſpeak in Behalf of this Great Man, whereto the beſt Phyſicians of all Nations, Ages, and Languages have univerſally ſubſcribed, and therewith remove the Objections that might ariſe either through Prejudice or Ignorance againſt the Opinion of him and the other ancient Writers, of which I have made frequent mention both in the Firſt and Second Part of this Book, and upon all dubious Occaſions call'd in their Authorities to ſtrengthen and confirm my Aſſertion; which I doubt not will be objected to me, as though a better and more compendious Method of healing were uſed now, than was in the Days of old. But for an Anſwer, I muſt refer the Objectors to what the late Serjeant Surgeon Mr. Charles Bernard *ſays upon this Subject, than whom a better Judge could not be produced;*

produced, who, as the learned Dr. Freind *teſtifies, was for his great Learning and Experience both an Honour to his Faculty and his Countrey. If we enquire, ſays he, into the Improvements which have been made by the Moderns in Surgery, we ſhall be forced to confeſs, that we have ſo little Reaſon to value ourſelves beyond the Antients, or be tempted to contemn them, as the Faſhion is amongſt thoſe who know little and have read nothing, that we cannot give ſtroner or more convincing Proofs of our own Ignorance as well as our Pride. For whoever hath been converſant in their Writings, and hath an Opportunity and Capacity of comparing and judging from his own Experience, will readily confeſs, that they are more accurate in deſcribing the Pathognomonics, and more juſt and nice in diſtinguiſhing the Species of Tumours and Ulcers, than our more refined Moderns are: The chief Improvements that have been made in Surgery, are chiefly owing to Anatomy, by which we are enabled to ſolve many of thoſe Phænomena*

nomena which before were inexplicable; but the moſt important Part, in the Interim, remains little better than the Antients left it. As an unconteſtable Proof of this, I appeal to all thoſe Bodies of Surgery that have hitherto been publiſh'd by the moſt learned and celebrated of the Moderns, being all manifeſtly Tranſcripts from one another, and the beſt of them from the Antients. Hieron. Fabr. ab Aquapend. *a Perſon of unqueſtioned Learning and Judgment, is not aſhamed to let his Readers know, that* Cornelius Celſus *amongſt the* Latins, Paul Ægineta *among the* Greeks, *and* Albucaſis *among the* Arabians, *are the Triumvirate to whom he principally ſtands indebted for the Aſſiſtance he received in compoſing his moſt excellent Book. But how many Operations are there now in Uſe, which were unknown to the Antients? "I fear (ſaith this "excellent Perſon) that upon a due "Enquiry there will be more uſeful ones "found to be omitted than to have been "invented by us; which Things being "duly*

" *duly conſider'd, ought to induce us di-*
" *ligently to peruſe their Writings, and*
" *compare them with the Moderns, be-*
" *fore we proceed to cenſure; leſt other-*
" *wiſe we ſhall be found ſo ignorant of*
" *their ſound Doctrine and Learning,*
" *as ſcarce to know the Language it*
" *was wrote in.*

But enough of this. I ſhall now return to the Subject in Hand, which I have divided into two Parts; the one general, and the other particular, according to the Advice of the ſage Philoſopher, who counſels us to begin firſt with general Things, and afterwards deſcend to Things particular (which has ſtood as a general Axiom in all Arts and Sciences.) I therefore being mindful hereof, have ſeparated the one from the other, beginning, in the firſt Book, with the general Intentions of the principal Heads in Surgery; wherein I have laid down, in a very plain and familiar Manner, all the Precepts and cautionary Rules that are to be obſerved in the Cure of Tumours, Ulcers, Wounds, Fractures,

tures, and other preternatural Affects incident to a humane Body, describing at the same Time the simple and compound Medicines that are required for each, with the Time and Manner of Use, the Variation they admit of upon several Accounts and different Circumstances occurring; to which I have added the Method of opening an Abscess, with every minute Particular thereto belonging; and, as Occasion served, have made suitable Reflexions upon several Cases throughout the whole Work, opening the Way now and then to several manual Operations, tho' I have purposely omitted treating of them at large as foreign to my present Design, which chiefly has Regard to Medicine. And tho' Van Horn, *(a great Artist, and very judicious Person in other Respects) speaks slightly of this Part of Surgery, in comparison of the operative; yet other good Judges are of another Mind: For Instance,* Paræus, *an Author of the first Rank, does not scruple to assign the chief Place to Medicines, telling us, that there is nothing*

nothing in the World which ſooner, and as it were by a Miracle, aſſwages the horrid Torments of Diſeaſes. And therefore Herophilus *called them, when properly adminiſtred,* Deorum manus, *the Hands of the Gods. Whence he gravely concludes, that it cannot be expreſſed by Words, what Power they have in healing; and conſequently the Knowledge of them is abſolutely neceſſary, not only for the Prevention, but alſo for the driving away of Diſeaſes, as is confirm'd both by Reaſon and Experience: For what could be done in the Cure of Tumours, Wounds, Ulcers, and ſundry other Maladies, without the Aſſiſtance of proper Remedies? wherein manual Operation (ſo far as regards Inſtruments) hath alway the leaſt Share; as the moſt profeſſed Adverſaries muſt be obliged to confeſs without any Derogation from the Credit of the other, which in their Turn are of equal Advantage; as may be ſeen in ſeveral Places of this Book, particularly in the* 12th, 13th, *and* 14th *Chapters of the Firſt Part, wherein I have explained*

plained the ſeveral Methods of agglutinating a recent and ſimple Wound, ſcaling a corrupted and putrid Bone, eradicating fungous Excreſcencies, conſuming callous and fiſtulous Ulcers, and reſtraining an arterial Hæmorrhage, with ſeveral the like dangerous and obdurate Affects, in which the Aſſiſtance of both is required. And farther, for the Satisfaction of the young Student, the pyrotick Claſs, which before was very intricate and complicated in its Branches, from the Affinity of Nature and Degrees of Quality thoſe Remedies partake of, is here reduced to due Bounds, and circumſcribed within appointed Limits, according to their Degrees of acting and Manner of Operation. Whereby the Surgeon, at firſt View, may from hence know which of them will ſuit his Purpoſe beſt. And laſtly, I have annex'd the Doctrine of Revulſion and Derivation, deduced from the Opinions of the Greek *and* Arabian *Practitioners, with ſome of the moſt eminent Moderns, ſhewing where theſe two different Intentions may be performed*

formed to the beſt Advantage, with the ill Conſequence attending a wrong Procedure, illuſtrated with practical Examples ſuited thereto.

The Second Part of this Work is a Chirurgical Diſpenſatory, conſiſting of the moſt approved Remedies that could be ſelected from the Works of ſeveral well experienc'd Artiſts; which, for the better underſtanding, even of the meaneſt Capacities, I have tranſlated into our native Language, exhibiting the Quantity of the Ingredients at large, and the Manner of compounding likewiſe, without referring the Reader to that Art he is a Stranger to. And at the Cloſe of each Proceſs I have inſerted the Cautions requiſite to be obſerved in the Preparation, with a full and rational Account of each Medicament, and the Manner of its Operation for a Concluſion. And leſt any One might doubt of the Certainty of what is here advanced, I have taken care to confirm the ſame by unexceptionable Authorities. So that thro' the Whole, I can ſafely affirm, there is nothing inconſiſtent

ſiſtent with the Rules of the Art, or any thing delivered that may lead the young Surgeon into Errors, the curative Indications being laid down in ſuch plain Rules, that 'tis almoſt an Impoſſibility for any one who pretends to Phyſick or Surgery to miſtake them. Whence I have ſome Reaſon to hope, that it will not prove altogether unacceptable to the candid and ingenious Reader, and eſpecially the Unexperienced, for whoſe Benefit I have chiefly compiled it; which will be a full Satisfaction for the Pains I have taken: Intreating, by way of Concluſion, that where any ſmall Errors may have eſcaped me, they may be corrected, and all other Deficiencies pardoned; which will be the more eaſily granted, when 'tis conſider'd what frequent Interruptions I daily met with; and the ſmall Time my Buſineſs allow'd me for Study, may, I hope, be allow'd as a ſufficient Plea for what is found amiſs.

CHIRUR-

CHIRURGICAL INSTITUTIONS, &c.

BOOK I.

CHAP. I.

Of Repelling Medicines.

Repelling Medicines, called by the ancient *Greek* Writers ἀποκρυτικὰ, are ſuch as generally in the Beginning of Fluxions are firſt made uſe of to reſtrain the *Impetus* of the influent Humours, and prevent their Stagnation in any Part of the Body, (whereto they may commodiouſly be adhibited;) and this they effect by virtue of a cold or adſtringing Quality, (either ſeparately or conjunctly taken) whereby the Solids being braced up to their due natural Tone, are enabled to propel or drive

forward the circulating Fluids within their proper Canals, without obſtructing. Whence, as *Hollerius* rightly obſerves, a Stop is hereby put to the Beginning and Increaſe of phlegmonous, inflammatory Tumours, and a Caveat enter'd againſt the ſucceeding Conſequences; ſuch as Apoſtemations, malign Ulcers, Fevers, Pains, and ſundry other Maladies thereon depending.

Concerning the Nature and Quality whereof, *Weckerus*, from the aforeſaid Author, remarks, that there was a great Controverſy amongſt Phyſicians, ariſing from the different Methods they propoſed, to anſwer this Intention; whence came the Repercuſſive Catalogue to be ſo plentifully repleniſhed with various Remedies of different Natures and Qualities, ſome of which ſeems to bear ſo little Affinity to this Work, that they rather look diametrically oppoſite thereto; as may be gathered from the great Number of hotter Plants we commonly meet with amongſt the more proper repelling Simples; ſuch as Wormwood, Centaury, Gentian, Mint, Germander, and the like hot and dry Medicines, partaking of a diſcutient Nature, (as their notable Heat and Pungency ſufficiently declares;) yet notwithſtanding they have obtain'd a Place here, and that by the Authority of the Ancients; for I find that both *Galen* and *Avicenna* make mention of warm Repellents (as they term them) to be uſed in cold pituitous Tumours, or thoſe ariſing by Congeſtion. Of the ſame Opinion is *Cornelius Celſus*, and ſeveral others of great Fame: But whether in a ſtrict Senſe they can be ſaid to act properly as a Reper-

Repercutient, or not, I ſhall not ſpend much Time in diſcuſſing; ſeeing they are eſtabliſhed by ſo great Authorities, even by *Galen* himſelf, who in ſeveral Places of his Works expreſly declares it. Yet 'tis here to be underſtood, that whenever they are order'd for this Intention, it is only in theſe Caſes, *viz.* where the Matter is groſs and viſcid, ſuch as occurs in cold phlegmatick Tumours, or where ſome Portion of the Fluids is ſuppoſed to be extravaſated, or ſlipt out of the capillary Veſſels, an Incident very common to the Augment or ſecond Stage of inflammatory Swellings; which then requires a different Treatment from what is requiſite in their firſt Inſult, as will appear more particularly hereafter; having firſt conſidered how, and after what Manner, theſe warm ſubtil Remedies may be ſaid to challenge a Place in this primary Intention. *Firſt*, then, we are to know, that in the aforeſaid Circumſtances the contained groſs Humours, by reaſon of their Conſiſtence and Quality, together with the preſent Languor and Debility of the Part affected, are incapable of Expulſion by cold Medicaments, that only are of Service while the Matter is *in fieri*, or the Obſtruction recent; and therefore a Neceſſity ariſes of calling in the warmer Tribe, in order to attenuate and reſolve the impacted Matter; which being once effected, and the Part freed from its Infarction, the relax'd and weaken'd Fibres, by virtue of the ſaid Quality, will conſequently ſhrink up, and thereby recover their due Tenſity, or natural Elaſticity; as is evident from all membranous Subſtances, when expoſed

to a moderate Degree of Heat, how they will immediately brace up, and become tenſe and firm. The ſame holds good of the animal Fibres, when affected or expos'd to the like Influence; and in this Senſe only it is, that they can be allowed this Denomination to which *Galen*, 2 *ad Glauc.* 14. ſeems to allude, when he ſaith, *Quod abſinthium roborat omnes partes, dummodo ex laxitate proveniant*; which is as much as to ſay, that when the Parts are relaxed by too much Humidity, they are to be corroborated or ſtrengthen'd by Medicines of a contrary Quality; ſuch as Wormwood, and other the like hot and dry Plants partaking of a moderate Aſtringency. But *è contra*, when the Fibres of the capillary or evaneſcent Arteries are ſtretch'd beyond their natural Power of Reſtitution, by the effervеſcent Blood ruſhing in upon them faſter than can be received by the correſponding Veins, and there, through a Default of the Solids or Fluids, an Obſtruction is forming therein; the Caſe is alter'd, and Recourſe muſt then be had only to ſuch Remedies as have Power to contract the Fibres, ſtraiten the Diameters of the dilated Veſſels, and intercept the Fluxion: All which, doubtleſs, is beſt effected by Medicaments endow'd with a refrigerating or adſtringing Quality; as *Gal.* 5. *De Simpl. cap.* 15. moſt excellently declares after this Manner: *Medicamenta repercutientia (inquit) ſunt frigida, & craſſarum partium, ideo denſant partes; & profundas etiam refrigerant.* The ſame he further confirms in *Lib.* 4. *De comp. Med. ſecund. Loc. cap.* 8. poſitively declaring, that thoſe Medicines

dicines which are of a cold and aſtringing Faculty, are properly and truly term'd Repellers.

Guido divides theſe Repercutients into two Sorts, the one common, and the other proper: The firſt are of a temperate Quality, and ſeem chiefly deſign'd to abate the Pain and Inflammation of the Part, by lenifying and ſoftening the diſtended *Febrillæ*; of which Sort are, the *Ol. roſ. Chamæmel. Maſtichin. Fol. Malv. Alth.* &c. The ſecond (and truly more proper) are of a contrary Nature, being cold, or aſtringing; whereby they repel and throw off the Humours lodg'd in the Part, and inhibit a farther Fluxion thereon: Such are, *Fol. Plantag. Solan. Lethal. Semperviv. maj. Equiſet. Bol. Arm. Terr. ſigil. Oxycrate*, and ſeveral others of the like Kind. But the moſt comprehenſive and inſtructive Diviſion we have from *Galen*; who teacheth, that ſome Medicaments repel by ſimple or mere Coldneſs, without any Aſtriction conjoined; and that others again are both cold and aſtringing. The firſt are thoſe endued with a cold and humid Quality; ſuch as Cold Water, Plantain, Houſleek, Lettice, Cucumbers, Melons, Frog Spawn, and in general, all the Juices and diſtill'd Waters of Vegetables, wherein a cold, inſipid, watery Taſte, or a nitrous Salt, hath the Predominancy. Theſe acting merely by virtue of their refrigerating Faculty, are uſually ranked under the milder Claſs of Repellents, and therefore moſt ſuitable where the Fluxion and Inflammation is but ſmall, the Veſſels likewiſe narrow or ſtrait, the Senſe of the Part exquiſite, and the Member it ſelf not in a

depending Poſture or Situation. In theſe Caſes, the aforeſaid cold watery Repercuſſives may ſucceſsfully be applied.

But *è contra*, where a great Fluxion or Inflammation is imminent, the Veſſels large, and the Patient of a robuſt Habit of Body, the Part depending, and of an obtuſe Senſe, then are the ſtronger Remedies abſolutely neceſſary, wherein both the rehears'd Qualities are comprehended; the one to repel, and the other to conſtringe. And this may be effected by all ſuch Bodies as partake of cold, groſs, and earthy Parts, diveſted of Acrimony or Sharpneſs; whereof an ample Catalogue may be deduced from the Vegetable and Mineral Kingdoms. The moſt common are, the Flowers and Bark of Pomgranates, Oak, Bramble, Horſetail, Knotgraſs, Verjuice, Vinegar, rough Red Wine; and all the crude Juices of unripe Fruits partaking of an acerb, auſtere, or acid Taſte are annumerated amongſt the moſt powerful Repercuſſives; whereto may be annexed, the Bole Armoniac, Dragons Blood, Ceruſs, Litharge, Chalk, Pompholix, and the like terrene Subſtances; whereof many uſeful Compoſitions may be formed, of which hereafter. Amongſt the officinal Compounds, may be ſelected for this Uſe, the *Ol. roſar. & Myrtin. Unguent. Populneum, Alb. Camph. Nutritum, Emp. Diachyl. Simpl. de Bolo, de Minio, cerat. Galeni refriger. &c.* in the Application whereof, ſeveral material Circumſtances are principally to be regarded: Firſt, in reſpect of the Subject, whether of a ſoft, lax, and humid Temperament, ſuch as the Bodies

dies of Women, Children, and ſedentary Perſons; or, contrariwiſe, of a hard, dry, and firm Habit, as commonly is perceived in adult, maſculine, and robuſt Conſtitutions. Secondly, of the Part it ſelf; which admits of the ſame Variation, wherein its Site, Senſe, Office, and Temperament, are equally to be conſider'd. As Thirdly, and laſtly, the Effect, whether great or ſmall, together with its State, Nature, and ſeveral other Circumſtances that demand a ſerious Attention, each of which requires a particular Treatment; for as not only the Bodies of Men, Women, and Children, do vaſtly differ from one another in Temperament, but even the Parts of the ſame Body do ſuffer a like Variation, the Medicaments thereto appropriated muſt neceſſarily differ accordingly; it being well known to every one, that lax and tender Habits cannot bear, without great Annoyance and Injury, thoſe ſtrong and powerful Remedies which robuſt and compact Bodies will very well diſpenſe with; neither can a Part endu'd with an exquiſite Senſe, endure that which another of a more obtuſe or dull Perception may advantageouſly comply with. The ſame may be ſaid of all the reſt from which the curative Indications are taken: For, as *Hollerius* obſerves from that excellent Precept of *Leon. Tuchſius Inſtit. Med. Lib. 5. Sect. 1. cap. 5.* the Strength of the Medicament is always to be proportioned to that of the Diſeaſe; for a too weak Repercuſſive will avail little in a great and vehement Inflammation; as, on the other Hand, one too ſtrong will induce or bring on a new kind of Diſeaſe contrary

to the former: Such as gangrene, ſchirrous, obdurate Tumours, *&c.*

This being premiſed, we ſhall proceed next to ſhew the Time wherein they may be applied to moſt Advantage; and that, by the general Conſent of all Authors, is in the very firſt Beginning of a Fluxion, while the Humours are thin and fluxile, and as yet contained within their proper Veſſels; according to *Gal.* 13. *Meth.* 16. ſaying, *Incipiente Tumore, ſeu Inflammatione, debemus uti repellentia, nec bonum eſſe, in principio diſcuſſoria his admiſcere.* The Reaſon whereof he gives us in *Therapeut. Lib.* 13. *cap.* 6. to this Effect, *i. e.* when the Blood which flows in upon an affected Member is thin, (or hath not wholly loſt its Fluidity) then we uſe only Repellents; but when the Humours are groſſer, (or more infixed in the Part, ſome Portion thereof being likewiſe extravaſated) they are in that State to be mixed with Diſcutients; for whilſt the Tone of the Part is not quite worn out and deſtroyed by the preternatural Diſtention, and the Humours in ſome meaſure retain their Fluidity, we may, by the Aſſiſtance of proper Repercuſſives, (timely applied) ſo conſtringe and ſtraiten the Diameters of the dilated *Tubuli*, (by bracing up their conſtituent Fibres to ſuch a due Pitch of natural Tenſity) as thereby enable them to vibrate and ſhake off the ſtagnating Juices; as is confirmed by the Teſtimony of daily Experience, which ſhews how ſpeedily and powerfully the Fibres are contracted upon the ſudden Application of any extreme cold Thing; and the more quickly it is adhibited, the more

more forcible and permanent is the Effect. Hence comes that preſent Relief to a bruis'd or ſprain'd Part, by immerſing the ſame immediately in cold Water, or applying thereto a Compreſs moiſtened in Oxycrate, (or ſimple Element alone) which at once repreſſeth the Fluxion, and therewith obviates the impending Symptoms of Pain, Tumour, and other moleſting Accidents; and this can be attributed to no other Cauſe, than the ſudden Impreſſion made on thoſe ſenſile Organs, that are equally affected by an Exceſs of Quality, however otherwiſe different in Conſequence: For we know that Heat in an intenſe Degree will ſhrink up contractile Bodies, as well as Coldneſs; yet with this Difference, that the one is attended either with Pain, Fluxion, and Inflammation; or if more remiſs, it rarifies (according to its Nature and inſeparable Quality) the Fluids, and therewith diſtends the Solids, and gives way to a greater Fluxion and Extravaſation; whereas the other conſtringes the Veſſels, and condenſeth the Fluids, and thereby corroborates both the Tone of the Part, and likewiſe reſiſts the Impulſe of the Humours, which is all that is required for this firſt Intention, eſpecially while the obſtructing Juices are contain'd within their proper Canals. No heating diſcuſſive Remedy can ſafely be adhibited for the aforeſaid Reaſons, unleſs we be aſſured that ſome Portion hath already ſlipp'd out into the Interſtices of the Parts, or be of a groſs and viſcid Nature: Then, by the Appointment of *Galen*, we may ſafely add more or leſs of theſe warm Medicaments, according as the Nature and

preſent

preſent State of the Tumour ſhall indicate. But where nothing of this Kind is apparent, as in the very firſt Beginning of inflammatory Tumours, (if nothing extraordinary contra-indicate) Repellents ſimply applied are the ſole and only Remedy, as the recited illuſtrious Author hath in ſeveral Places of his ineſtimable Works fully confirmed, by theſe following Reaſons: 1. In *Meth.* 13. *cap.* 16. he ſaith, that in the Beginning of Tumours the influent Matter is thin, fluid, and ſmall in Quantity, and the Elaſticity of the Solids (which the Ancients call'd the expulſive Faculty of the Parts) is not quite deſtroyed; and therefore there is Hope that by the Aſſiſtance of ſuitable repelling Remedies, the Tone thereof may ſeaſonably be retrieved, and enabled to throw off the ſuperfluous Contents to other more patent or open Paſſages. For the Veſſels (as he further tells us in 95 *Art. Med.*) receiving new Vigours from the additional Help of refrigerating or aſtringing Medicaments, expels the noxious Humours to other Parts; provided an univerſal Revulſion or Evacuation hath been premiſed, in order to abate the *Plethora*, and empty the neighbouring Canals of their ſuperfluous Burthen, which ought alway to precede the Uſe of topical Applications in full and plethoric Habits. 2. A quicker Diſcharge is made by Repulſion, than can be effected by Reſolution or Diſcuſſion; for both Reaſon and Experience aſſure us, that the Humours are much ſooner, and with greater Facility, ſhook out of the evaneſcent Arteries into the correſponding Veins, (which ſtill grow ampler

and

and larger, the nearer they approach the Heart) than can be attempted by the contrary Method, where a conſiderable Space of Time is required to attenuate and rarify the Blood to ſuch a Degree of Fluidity as may render it capable of permeating the inconſpicuous Pores and Paſſages of the *Cutis*, that are only adapted for the fineſt *Effluvia* of the Blood to paſs off by. 3. We ſatisfy hereby, that ancient Maxim, of *Contraria contrariorum eſſe remedia.* Inaſmuch as there is a preternatural inflammatory Heat in the Part affected, it requires to be treated with Medicines of a contrary Quality, ſuch as the refrigerating repelling Claſs affords us. And therefore we conclude, that the Uſe of Repercuſſives in the very firſt Beginning of a Fluxion, are far more proper to expel the ſtagnating Humours, and prevent the Increaſe of Tumours and Abſceſſes, than can be hoped from all the reſolving Claſs of Medicines put together. Whatever the ingenious and learned *Waldſchmidte*, *Etmuller*, and others, may affirm to the contrary, as is proved not only from the Authority of the Ancients, but alſo from ſeveral of the Moderns, (Men of great Account and Learning) who ſubſcribe to this rational Practice, as a Method moſt ſafe and certain, which *Guido*, an ancient and well experienc'd Surgeon, being fully appriz'd of, thus pathetically delivers himſelf upon this Subject:

" But I ſay, that in the Beginning of all Tu-
" mours, that are made by Fluxion, and eſpeci-
" ally phlegmonous, Repellents properly ſo cal-
" led are rather to be made uſe of than evapo-
" rating

" rating Remedies," ten Caſes only excepted, which he ſubjoins.

But as ſome of them are liable to Objection, I chuſe rather to inſert the ſeven Exceptions of *Galen*, and afterward annex the remaining three of *Guido*'s to 'em. The firſt we have from *Lib.* 6. *De Comp. Med. per Loc. cap.* 2. *viz.* that when the Matter flows to the Emunctories, as the Glandules in the Neck, Groin, Arm-pits, and thoſe behind the Ears, we are in theſe Circumſtances to avoid Repellents, leſt thereby the Humour ſhould be repell'd or thrown back upon ſome noble Part. Secondly, When a Tumour proceeds from a venomous Matter, as in a peſtilential Carbuncle, venereal Bubo, *&c.* the ſame Caution is of Force for the ſame Reaſons. Thirdly, When the Matter flows critically, (or is the Effect of a Criſis) as in malign contagious Diſtempers, we are forbid, by the Authority of *Hippocrates*, *Aphor.* 20. *Sect.* 1. *Quæ Judicantur & Judicata, neque movere, neque novare aliquid, ſive medicamentis, ſive aliter irritando, ſed ſinere*; becauſe this is a Motion and Endeavour of Nature, wherein ſhe works rightly, and therefore ought not to be diſturbed whilſt ſhe is making a Separation of the morbid Humours, but rather encourag'd and aſſiſted by proper Means; leſt a fatal Cataſtrophe be the Iſſue of ſuch raſh Proceedings. Fourthly, When a Tumour ariſeth in a plethorick or cacochymick Body, Repulſion cannot ſafely, and with any Proſpect of Succeſs, take Place, until a due Evacuation hath preceded. Fifthly, When the affected Member is weak, then are we to abſtain from

from the Application of all cold or aſtringing Medicines; for in ſuch Caſes, according to *Galen*, 13 *Meth. cap.* 16. & *de Compoſit. Medicamentor. Local. Lib.* 6. *cap.* 7. the natural Heat of the Part being very weak and languid, would utterly by ſuch Treatment be deſtroyed, and the Part it ſelf corrupt and putrify; an Accident very common to aged Perſons, when drawing near the Period of Life their extream Parts are often ſeized with an Inflammation, that very quickly, and of it ſelf, degenerates into a Gangrene: And therefore in ſuch Subjects and Caſes, all repelling and cooling Remedies are wholly to be eſchew'd. Sixthly, When a Tumour is attended in its Beginning with vehement Dolor, the milder Remedies (ſaith *Galen*, in *Lib. prædict. cap.* 2.) are indicated; ſuch as the lenient, anodyne, and paragorick Tribes afford, which by their oleoſe demulcent Quality, may relax the overhauled Fibres, obtund the Irritation, and appeaſe the Orgaſm of the Spirits. Seventhly, When an Inflammation or Tumour ariſes near to ſome principal Part, like as an Eryſipelas in the Neck or Face, the Matter is not to be driven back, according to the Authority of *Aph.* 25. *Lib.* 6. which ſaith, that an external Eryſipelas ſtriking inward, is bad; but an internal one coming outward, is good. The ſame may be ſaid of all other latent noxious Humours, when thrown out near to ſome principal Member; *ab Angina habito ſi tumor fiat in Collo, bonum; foras enim morbus diducitur*, is the Prognoſtick of *Aph.* 37. *Sect.* 6. for by the Repulſion of ſuch like Affects, a Phren-

zy

zy or Suffocation might, to the ſudden Deſtruction of the Patient, inſtantly enſue: A remarkable Hiſtory whereof, we have in *Bonetus Sepulchret. Lib.* 1. *Sect.* 6. *Obſ.* 2. of a young Man that was ſeized with an Eryſipelas in his Right Leg, which being unſkilfully treated by an Empirick with repelling Medicaments, the ſubtil bilious Humour (by this prepoſterous Method) being tranſlated upon the *Viſcera*, induced moſt direful Symptoms; as Fever, Swooning, Straitneſs and Difficulty of Breathing, unquenchable Thirſt, and at laſt a Phrenzy, that ended in Death: Upon which Account, *Mangetus* hath left us this prudent Counſel, *viz.* where the Diſeaſe is malign, Nature weak, and the Matter copious and acrid, with a Phlegmon or Inflammation of the *Viſcera*; in ſuch Caſes we are never to repel. Therefore (ſaith he) in a Pleuriſy and Peripneumony, the Blood being repercuſs'd, or thrown inward, would increaſe the Inflammation of the affected *Viſcera*.

Theſe are the Exceptions which *Galen* hath commanded to be obſerved in the Uſe of repercutient Medicines; whereto *Guido de Cauliaco* hath added three others; *viz.* Eighthly, When a Tumour is excited from a primitive Cauſe, *i. e.* Blows, Falls, and other external Accidents: But againſt this, doth the moſt candid *Fallopius* except; ſaying, that it is abſurd, and contrary to Experience, as is proved by the familiar Example of applying a Compreſs dipp'd in cold Water, to the Foreheads of Children when bruis'd by a Fall or Blow receiv'd thereon, and the Tumour immediately

mediately ſubſides. " And I, (continues he) in " Wounds of the fleſhy Parts, uſe *Poſca* and cold " Water, leſt a Swelling ſhould ariſe." The like Method is uſed in Contuſions, Fractures, Luxations, *&c.* where we uſe Oxycrate, Bole Armoniac, and the White of an Egg, with other ſuitable Repellents, to intercept and reſiſt the Fluxion. Ninthly, When the Matter is very much impacted. This is a needleſs Exception, becauſe in the very firſt Beginning of a Tumour, (wherein theſe Remedies are chiefly of Service) the Matter cannot be ſo groſs and viſcid, but that it is capable of Repulſion, if timely attempted. Tenthly, and Laſtly, When the Matter is groſs, and unfit for Expulſion. This is obnoxious, likewiſe, to the ſame Exceptions with the foregoing; it very rarely happening that the Humours are ſo clammy or viſcous in the firſt Stage of a Tumour, as utterly to reſiſt all Attempts this Way.

Theſe are the Exceptions laid down by the ſaid Authorities wherein repelling Medicaments are excluded; but in all other Caſes, whether the Tumour be excited from an internal or an external Cauſe, eſpecially in the inflammatory Kind, they obtain the firſt Place; as the celebrated *Guido* witneſſeth, who, to eſtabliſh their Uſe, hath commanded it as a general Precept to be obſerved.

" Let this (ſaith he) be a general Rule, or Ca-
" non of the Art, that in the Beginning of all
" Tumours which are produc'd by an Influx of
" Humours, excepting in the foremention'd Ca-
" ſes; that only ſimple or mere Repercuſſives
" are to be applied." Having

Having now explain'd the principal Intentions of Repulſion, and ſhewed where the ſame is ſerviceable, and where not, with the Nature and Quality of the Materials requiſite for this Work, and the ſeveral Cautions therein to be obſerved; it now only remains, before I conclude this Subject, to remark ſomething more particularly concerning the Time wherein theſe Medicaments may be us'd to the beſt Advantage.

To underſtand which, we are to be apprized that *Galen* hath appointed a twofold Beginning of all Tumours; the one (which he calls the firſt Inſult or Attack of the Diſeaſe) is deduced from the very firſt Moment of its Beginning, while the ſame is obſcure, and exhibits very few of the viſible Tokens to know it by: The other is taken from that Stage of the Tumour which is manifeſt both to the Eyes and Senſes, attended with the uſual concomitant Symptoms; ſuch as Pain, Tenſion, Inflammation, *&c.* in both which, Repulſion may be attempted, though very often with different Succeſs: For if the Fluxion be vehement, and the Obſtruction ſeated in a muſculous or fleſhy Part of the Body, the Humours are commonly either extravaſated, or ſo impacted in the Part, that by the Time the Tumour appeareth upon the Surface of the Skin, 'tis ſometimes render'd incapable of repelling; to avoid which Misfortune, it highly behoves the young Surgeon carefully to diſtinguiſh betwixt theſe two primary Stages, whereto if due Attention be had, 'twill not be found ſo very difficult as repreſented: For by examining into the procatartick or antecedent Cauſes,

Cauſes, (gather'd from the Patient) together with the preſent Symptoms, we may ſoon form a right Judgment that an Obſtruction is beginning in the Part, the Iſſue whereof will be a Tumour or Abſceſs (if not timely remov'd).

The evident external Cauſes are demonſtrable enough of themſelves, and therefore require no farther Explanation; the Symptoms whereby we may diſcover the former Caſe, are, when a certain Stiffneſs and Uneaſineſs is perceiv'd in the affected Member, with a ſmall Pain, and unnatural Heat therein, attended very often with a reddiſh Bluſh o'erſpreading the Surface: But as theſe two latter Tokens are ſometimes wanting, (eſpecially when the Matter lies deep) we are then to make a farther Enquiry with the Hand; for if the Patient complain of a Pain and Soreneſs in the Part when preſs'd, it is an evident Sign that there is an Obſtruction, although no Tumour outwardly appear; for by the Compreſſion, the diſtended nervous *Fibrillæ* will be irritated and put into an involuntary Motion, whence Pain will enſue; likewiſe a preternatural Heat, Hardneſs, or Tenſity, with an obſcure, undulatory, or throbbing Motion, may be perceived, by the Fingers, by reaſon of the involving Membrane being heav'd up by the Obſtruction, and the Courſe of the Blood hinder'd thereby. Whence there muſt needs enſue an Accumulation of Humours in the Part, and from the Accumulation a Diſtention of the Sides of the Veſſels, and from the Diſtention a Preſſure both of the Solids and Fluids; and from that, together with the Im-

pulſe of the ſucceeding Blood, will ariſe an Attrition of the ſeveral Parts of each; whereupon all the rehears'd Symptoms muſt neceſſarily be the Conſequence, although in a more remiſs Degree than when the Obſtruction viſibly manifeſts it ſelf by the Tumor.

To prevent the Augment or Increaſe of which, repelling Applications are indiſpenſably requir'd without waiting for its further Advance; leſt by the unneceſſary Delay the *Occaſio præceps* be let ſlip, and the Opportunity offer'd be paſt recalling; and this doubtleſs is one of the main Cauſes why this uſeful Intention becomes ſo often unſucceſsful, that ſeveral Perſons, even of great Credit, have ſlighted and condemn'd it: Which *Fallopius* in his Time took Notice and complain'd of, ſaying, that Phyſicians either were not preſent at ſuch a Beginning, or if they were, for the moſt part were ignorant of it, and for that Reaſon could reap little or no Benefit by it; eſpecially if the Tumor was too far advanc'd, which then requir'd the Aſſiſtance of another Intention: As *Galen* himſelf ſeems to intimate, when he ſaith, *Rarò reperiuntur morbi, qui ſola repercuſſione indigeant.*

CHAP. II.

Of Diſcutient *or* Reſolvent Medicines.

THE former Intention (either through Violence of the Fluxion, or Want of timely Aſſiſtance)

ſiſtance) being render'd fruitleſs and ineffectual, the Tumor, with all its Train of Symptoms, gradually advancing toward its ſecond State or Augment, (as may be perceiv'd by the increas'd Magnitude of the Effect, together with the Hardneſs, Pain, and Inflammation) requires then a different Treatment; for the extravaſated Humours lying out of the Verge of Repellents, can't be forc'd back into the Veſſels, and therefore muſt be expell'd by the Poroſities of the Part wherein they are inherent; and in order thereto, a previous Preparation is neceſſary, not only of the groſs Humour, but alſo of the Pores and Paſſages through which it muſt exhale or fly off: For which End, warm, ſubtil, and penetrating Remedies, are appointed, that by virtue of their active and volatile Principles, may reſerate the obſtructed Tubes, attenuate, rarify, and reſolve the ſtagnating Juices, to ſuch a Degree of Fluidity and Tenuity, as is requiſite for paſſing off by the cutaneous Pores, along with the Recrements of the third and laſt Concoction; whereby a ſhort Cut is often made in the Cure of Tumours, and a great deal of Pain and Trouble prevented that would inevitably accrue from ripen'd Abſceſſes, and ſubſequent Ulcers. Yet in the Uſe of theſe, great Caution is to be obſerv'd; for very often an indomitable Schirrus is produced hereby, as *Galen* witneſſeth, *Lib.* 7. *per Gen. cap.* 9. where rehearſing up the Cauſes of that Tumour, amongſt many others, mentions this as one of the moſt principal; which Thing being duly conſider'd, made *Weckerus*, a very learned

Author, to ſay, that unleſs a right Method be taken in the uſe of Diſcuſſive Remedies, they often do more Hurt than Good, by evaporating and drawing out the thinner Portion of the Humours, and leaving the Reſidue or groſſer Part ſo hard and fix'd behind, that afterward the ſame cannot be cur'd by Art. To avoid which Accident, (with ſeveral others hereafter to be mention'd) *Galen, Lib. 7. per Gen. & Lib.* 2. *De Arte curativa, ad Glauc. cap.* 4. hath order'd Emollients in ſuch Caſes always to be mix'd therewith; which laudable Practice is continu'd in Uſe unto this Day.

Theſe Remedies, both the ancient and modern Practitioners have divided into ſeveral Degrees or Orders; whereto they have attributed the different Appellations of Attenuants, Attrahents, Aperients, Reſolvents, Diſcutients, *&c.* yet all contributing to one and the ſame Intention, the only Difference reſiding in the Degree of Heat or Humidity, that may predominate in one Claſs more than another: But the moſt uſual Diviſion is, to reduce them under two Heads; *viz.* Areotick, and Diaphoretick; the former, and milder of the two, is reckon'd of a moderate Heat, without any manifeſt drying Quality, inclining rather to Humidity, whereby they appeaſe the Dolor, relax the over-ſtretch'd Fibres, open the Pores, and rarify the contain'd Humours; upon which Account, theſe milder Diſcutients take Place where the Senſe of the Part is exquiſite, the Pain vehement, the Tenſion great, the Obſtruction partial, and ſeated near the Superficies, the Habit

of the Body likewiſe of a lax and humid Nature: Theſe Circumſtances concurring do always indicate the Choice of the mildeſt Remedies.

The Areotick Simples appointed for the ſaid Uſes, are the Flowers of Chamomel, Elder, and Melilot; the Leaves of Mallows, Marſhmallows, Pellitory, Wormwood, Centaury, Linſeed, Fenugreek, Barley and Wheat Flour, Yolks of Eggs, Saffron, Camphire, white Bread, new Milk, warm Water, the Fat of domeſtick Fowls, *&c.* whereof various *Formulæ* may be prepared: The officinal Compounds are, the *Ol. Cham. Sambuc. Vulpin. Unguent. Dialthææ & Sambuc. Empl. mucilaginib. Melilot. Diachyl. magn. cum Gum. &c.*

The hotter Kind of diſcutient Medicaments called Diaphoretick, are of a much ſtronger and more acrid or biting Quality, whereby they not only very much rarify the included Humours, but alſo attract them powerfully toward the Superficies of the Body, and for that Reaſon are ſeldom us'd alone, but generally mix'd either with ſome of the repercuſſive or emollient Claſs, in order to infringe their Heat, and contemperate their Acrimony, that might otherwiſe be liable to produce thoſe Diſorders the aforeſaid Authors complain'd of: For it is againſt this Tribe only, that the Objection is of Force, and wherein ſo much Circumſpection is requir'd in their Uſe, that Authors have put in many Caveats to eſchew thoſe Inconveniencies they are obnoxious to, by reaſon of their hot and dry Quality, which the Ancients plac'd in the third Degree; whereby it appears, that they come near in Quality to thoſe Medi-

caments they call attractive; the Affinity whereof is ſo very great, that as the ſaid *Wecker* truly obſerves, there are no Diſcutients (eſpecially of this ſtronger Claſs) but what will attract, and likewiſe no Attractives, but what will alſo diſcuſs; the only Diſtinction being in their Degrees of Quality, which *Galen* himſelf confirms, *Lib.* 2. *de Comp. Med. per Gen. cap.* 13. ſaying, *Quod medicamenta reſolventia, & attrahentia parum differunt:* Therefore ſeeing that the Difference is ſo little, and that Attraction or drawing outward the thinner Portion of the Humours, is not the main Intention in view, but rather a Diſſipation and Reſolution of the whole Maſs of the offending Contents, we are then oblig'd by the Rules of Art ſo to bridle and infringe their acrimonious Particles, that they may firſt fuſe and reſolve the extravaſated Humours, and then rarify the ſame into the Form of a *Halitus*, or Vapour; and laſtly, attract that thin ſubtil Subſtance toward the Surface of the *Cutis*, which is all the requiſite Conditions neceſſary for this Intention, as ſhall hereafter be more fully explain'd. In the Interim, we ſhall now enter into a Detail of the ſimple and compound Medicines that are uſually ranked under this Diviſion. Of the firſt Sort, are the Roots of Briony freſh gather'd, Squills, Onions, Gentian, *Ariſtolochia*, or Birthwort, Orrice, Leaves of Horehound, Mint, Germander, *Origanum*, Pennyroyal, Sage, Thyme, Hyſſop, Dill, Fennel, Calamint, Ground Pine, Seeds of Cummin, Anis, Carway, Coriander, Bayberries, Juniper, and in general, moſt of the carminative Tribe,

and

and aromatick Claſs, are frequently introduc'd for this Work, when reduc'd into a convenient Form (whereof the liquid is the moſt eligible:) But as Cuſtom hath prevail'd, and brought into Uſe, Cataplaſms, Cerots, Emplaſters, Unguents, *&c.* form'd of reſinous and gummy Bodies, incorporated with a Portion of ſome unctuous or oleous Subſtance, in order to give them a due Conſiſtence; we ſhall, in compliance therewith, annex ſome of the moſt common and uſual: Such are the *Empl. Oxycroc. Stictic. Paracelſ. Diagalb. Crocatum*; *Cerat. & Empl. ex Ammoniaco, Unguent. Baſilic. Dialthææ*, and others of the like Nature; whereof many conciſe and uſeful *Formulæ* may readily be prepar'd by diluting or letting down the Body of one or more of the ſaid Compoſitions, with a due Quantity of ſome proper Oil, into the Form of a Cerote or Liniment, that may be acuated upon Occaſion, with an Addition of ſome chymical Oil, or Spirit, in order to render it more penetrating and reſolving, and likewiſe to correct the oleaginous Quality of the Medicament, which otherwiſe might be apt to ſtop the Pores, and thereby hinder the Intention it is deſign'd for; an Accident very common to all viſcid and emplaſtick Compoſitions, wherein any unctuous or greaſy Matter enters in pretty conſiderable Quantity. And this truly is the Reaſon why Cataplaſms are found ſo often unſucceſsful for this Deſign; as may appear from the Materials whereof they are compos'd: The *Farin. Sem. Lini, Fænugr. Tritici, Orobi, Lupan. &c.* that generally form the Baſis of them, are all of a glu-

tinous, viſcid, and mucilaginous Nature, eſpecially when boil'd long over the Fire in Milk or Water (the common *Menſtruum* in ſuch Caſes:) But leſt that they ſhould grow too hard and ſtiff, and ſo prove uneaſy to the Part, and give Occaſion to freſh Accidents, a due Quantity of *Axung. Porcin.* or ſome ſuch like fatty Subſtance, is commonly added to obviate that Inconvenience; from all which, it is evident, that they ſeem rather to block up and hinder the Perſpiration of the Part, than open the Pores for the Tranſit of the rarified Matter, and by that Means promote or help forward the Work of Suppuration, as all tenacious, adheſive, and clammy Medicines do. Therefore they ought very cautiouſly to be us'd upon this Occaſion, unleſs ſome volatile attenuating Subſtance be mix'd therewith; ſuch as Camphire, or the like ſubtil Remedies, that by their Activity and penetrating Quality may open the Pores, which the Viſcidity of the Compoſition would otherwiſe be apt to ſhut up.

The late learned Dr. *Freind*, (whoſe Name ought always to be mention'd with Honour) hath put this whole Doctrine of Diſcuſſion in a very clear Light, from whom, for the Benefit of thoſe that have not perus'd his Works, I ſhall take the Liberty of tranſcribing ſome of the moſt material Heads belonging to this Intention.

Firſt, He obſerves from *Aetius*, that in the Work of Diſcuſſion there are two proper and genuine Intentions that ought to be carried on jointly together; the one is to open the Pores for the Perſpiration of the obſtructing Matter, and the other

other to attenuate and alter the Humours, ſo as they may recover their uſual circulatory Motion: For if we ſhould only purſue the firſt Intention, (*i. e.* of opening the Pores) the thinner Part of the Matter (according to *Aetius*'s Obſervation) would fly off, whilſt the Remainder grows ſtiffer, fixes the Obſtruction, and thickens the Membranes. Hence, ſo often, upon the Uſe of violent hot Diſcuſſives, that promote too free a Perſpiration, is left an incurable Induration and *Schirrus*. 2*dly*, On the other Hand, we muſt purſue this Deſign of attenuating in ſuch a Manner, as to eſchew thoſe Things which clog or obſtruct the cutaneous Paſſages; and for that Reaſon, (amongſt other unctuous Subſtances) Oils are condemnable, even from the Time of *Galen*, who expreſly declares that they ſtop the Pores, and therefore, in Conjunction with *Hippocrates*, forbids the Uſe of Oils and Fats in freſh Wounds and Ulcers for the aforeſaid Reaſon. But here 'tis only to be underſtood of the common and greaſy Sort; for the Oil of Turpentine, and the like chymical Medicines, which are nothing but Spirits concenter'd in an oleaginous Subſtance, are no ways chargeable with thoſe Faults as daily Experience dictates to us. 3*dly*, From the aforeſaid Author he remarks, that in the making of Cataplaſms great Care ought to be taken that the Flower of Beans, Lentills, *&c.* us'd therein, be not too much boiled, leſt thereby they ſhould contract a Viſcoſity, and ſo occaſion a ſtopping of Perſpiration in the affected Member: The Reaſon whereof (ſaith he) is plain enough to any one who underſtands the Ana-

Anatomy of a human Body; for the cuticular *Laminæ* are ſo diſpos'd and rang'd over one another in ſuch a Manner, that they are often cemented and glued together, by ſo thin and ſubtil a Vapour as the perſpirable Matter it ſelf. So in Inflammations and Strains, the glutinous oleaginous Subſtances are certainly prejudicial, and inſtead of diſcuſſing the Tumours, often bring it to Suppuration, to the no little Hazard of the Patient; eſpecially if the Tumour have its Seat near a Bone: For then there is Danger of the Humour's fouling. 4*thly*, He condemns the Uſe of Wax, Pitch, and gummy Bodies, as being no leſs prejudicial in this Caſe, by reaſon of their glutinous Texture, whereby they produce the ſame Inconvenience; for in phlegmonous and the like inflammatory Tumours, ariſing from Fluxion, the warm gummy Plaiſters applied too early, increaſe the Fluxion, augment the Tumour, and heighten the Pain. For (continues he) when we rarify and attract the Humours, and at the ſame Time obſtruct the Pores, ſo as to hinder a free Diſcharge, we are ſo far from promoting Diſcuſſion, that we put Nature upon another, and quite different Effort; that is, of Suppuration. 5*thly*, He takes Notice, that *Hippocrates* us'd only a few Cerots, but directed his Practice wholly to the Uſe of Fomentations, as the moſt proper Way both of obtaining the full Virtue of the Simples, and of conveying the ſame into the obſtructed Part. *Laſtly*, He remarks from *Galen*, that the Plaiſters ſhould not be too hard and ſtiff; for thereby, doubtleſs, they muſt ſit very uneaſy upon the aggriev'd Part,

Part, and ſo create Pain, Fluxion, and greater Swelling; upon which Account, Liniments and ſoft Cerots (as lately obſerv'd) are more eligible in this Caſe, according to the Doctrine of *Galen* and *Leonides*; concluding with this juſt Remark, that if Opium and Camphire (two of the moſt attenuating Subſtances we have) were to enter in larger Proportion (than what is commonly order'd) in the diſcutient Compoſitions, we ſhould not fail of reaping more excellent Effects thereby.

Theſe being the moſt pertinent Remarks (in regard to our preſent Subject) which that excellent Author affords us, we ſhall now proceed to ſhew, that as all this is very true in the main, as far as it relates to inflammatory or phlegmonous Tumours; yet, in thoſe ariſing from Congeſtion, or excited from a ſcrophulous or venereal Diſpoſition, where the pituitous Matter is very groſs, and deeply impacted, as in Nodes and Exoſtoſes of the Bones, and in ſeveral other Caſes, there is an Exception; for where the Humour lies deep, and is of a groſs and viſcid Nature, the Part it ſelf of a weak and languid Heat, the Uſe of adheſive gummy Plaiſters, and other the like Applications, are not wholly to be forbid, but are even preferable to the more liquid Remedies that paſs off ſooner, and therefore cannot have that Efficacy upon the groſs and viſcid Matter, which in order for its Solution and Diſperſion requires a Medicament to ſit cloſe thereto for ſome Time; to rouze up thereby the languid Heat of the Part, and excite it to Action, as *Fallopius* rightly obſerves, that the natural Heat ought to be augmented

mented by proper Medicines; for thereby (ſaith he) the Matter is diſſolved and converted into a Vapour, and laſtly carried from the Center to the Circumference of the Body. And this neceſſarily muſt be beſt effected by thoſe topical Applications (ſuch as the emplaſtick and adheſive Compoſitions) that retain the Heat the longeſt within their Pores, as daily we ſee experienc'd from the good Effects of the *Empl. de Vigo, ſive De ranis cum mercurio*, in the moſt obſtinate Tumours, whereto the aforeſaid Author ſeems to give his Aſſent, when he tells us that thoſe Applications which have a Mixture of Mercury in them, prove the moſt effectual Diſcuſſives, and theſe muſt be either Unguents or Emplaſters (which are equally obnoxious to the ſame Objection;) for we know of no other external Compoſition or Form of Medicine that admits of Mercury for this Uſe; and though the whole Streſs may ſeem to lean upon that celebrated Drugg, yet we find that other ſimple Preparations will even perform the ſame Effect, and that in the moſt obſtinate Caſes, ſuch as the Sciatica, *&c.* whereto the *Radix Bryoniæ* is accounted a Sort of Specific, notwithſtanding its glutinous and ſlimy Nature, and the Profundity of the Part whereto it is to exert its Energy, whoſe happy Effect in this ſtubborn Malady, can be attributed to no other Cauſe (ſaving its attractive and heating Faculty) than the additional Help of a long Duration upon the Part affected: But of this enough. We ſhall now return to the Uſe of theſe diſcutient Remedies, which is to be regulated by ſeveral conditional

Circum-

Circumſtances, like to the foregoing Intention of Repulſion, where the Age, Sex, Habit, Nature, and State of the Tumour indicate the Choice of a ſuitable Remedy; to reduce which to adequate and proper Examples, can't be expected, neither ſhall I attempt it; it being ſufficient to obſerve in general, that tender lax Habits, ſoft, humid, warm Parts, ſuperficial inflammatory Tumours, and the like, do always require the milder diſcuſſive Remedies; as the contrary Circumſtances do the more ſtrong, wherewith a due Portion of Repellents are to be mix'd during the whole Increaſe of the Diſeaſe; according to that excellent Text of *Galen*, which ſaith, that where Inflammations begin and increaſe, repelling Medicines muſt bear the chief Sway, *Lib.* 1. *per Gen. cap.* 4. and in ſeveral other Places he ſpeaks to the ſame Effect: The Reaſon whereof is, becauſe the Matter in this Stage of the Tumour is partly in Fluxion, and partly infixed and ſtagnated in the Interſtices and Poroſities of the Part; and therefore a two-fold Indication ariſeth, the one to repreſs and ſtop the Fluxion, effected by means of the repelling Quality; and the other to attenuate and diſcuſs the extravaſated Matter by the Reſolvents. But as the Fluxion (that firſt produc'd and gave Birth to the Extravaſation) is the moſt urgent Indication, and whereon the other doth in a great Meaſure depend, there ariſeth an abſolute Neceſſity of continuing the Uſe of thoſe Remedies that are properly adapted to intercept and reſtrain the *Impetus* of the flowing Humours. Wherefore wiſely did this incomparable Author inſtitute this moſt

prudent

prudent and uſeful Precept, that at one and the ſame Time the influent Humours might be repell'd, the Fibres ſtrengthen'd, and the impacted Matter reſolv'd and breath'd out.

The hotter Diſcutients take Place where the others prove ineffectual, and the Indications are contrary to the foregoing; for in the Increaſe of phlegmonous Tumours they can ſcarcely be us'd with Safety, by reaſon of their hot and ſtimulating Particles, whereby they too vehemently attract and rarify the Fluids, and conſequently in that State excite a greater Fluxion and Inflammation, unleſs their Quality be infring'd and let down by a due Portion of ſuitable repercuſſive Ingredients added thereto; and then only in robuſt tough Habits of Body, hard dry Parts, deep Tumours, partaking of groſs Contents with the Fluxion abated, or ſmall in Quantity, can theſe ſtronger Remedies be ſucceſsfully applied; their Uſe and Efficacy extending chiefly to the Declination of Tumours; and where the Matter is groſs and viſcid, as in œdematous and the like cold Swellings, or thoſe proceeding from a flatulent Vapour, in which they are of approv'd Service, either us'd ſimply by themſelves, or mix'd with Emollients or Repellents, as the preſent Indication ſhall direct. However, obſerving this as a general Axiom, that in all inflammatory Tumours, and even moſt of thoſe ariſing by Congeſtion, (ſome particular Caſes only excepted) repercutient Medicaments always claim a Place amongſt theſe Diaphoreticks, or hotter diſcutient Claſs, through the whole Augment of the Diſtemper,

ſtemper, or at leaſt ſo long as the Fluxion is imminent; there being the like Indications of Repulſion and Diſcuſſion as afore taken notice of, ſaving that the nearer the Tumour approaches its State, the repellent Ingredients are gradually to be diminiſh'd, until at laſt the Diſcutients bear the whole Sway: The Reaſon whereof is evident from what hath lately been premis'd, *viz.* during the Augment of the Diſeaſe, Repercuſſives are order'd to prevent a greater Extravaſation of the Humours, and to recover, if poſſible, the Tone of the Part, whilſt the Diſcutients are acting their Energy upon the ſtagnating Fluids, to reduce them again to ſuch a State of Fluidity as is requiſite for their Tranſmiſſion by the ſecretory Organs appointed for that Purpoſe. But when the Swelling is come to its full State, and the Fluxion is ceas'd, repelling Medicines are then to be omitted, as of no Service; the extravaſated Humours requiring only to be reſolv'd and evaporated by the Aſſiſtance of warm Remedies; as appears from *Lib.* 13. *Meth. cap.* 16. where the recited Author delivers his Opinion to this Effect: *In ſtatu (inquit) phlegmones Diaphoreſin ſaltem habere locum, cum repellentia nil notatu dignum efficere queant.* The ſame Doctrine likewiſe holds good in the Declination of Tumours when reſolv'd this Way, as is confirm'd by the Authority of *Lib.* 3. *de Simpl. Medicament. facult. cap.* 10. and other Places: Which Method of Cure, as it is moſt ſafe and eaſy, is doubtleſs the beſt (next to Repulſion) and moſt deſirable, where the ſame can rightly be effected, the Signs whereof are an apparent and manifeſt Remiſſion

of

of all the Symptoms. As for Example, if the Tumour terminate by Reſolution or Diſcuſſion, the Inflammation and Pain will abate, the Pulſation leſſen, the Swelling gradually diminiſh and ſubſide, and the ſuperjacent Skin will alſo look white and flaccid (a certain Note that we have gain'd our Purpoſe); but *è contra*, if the Swelling tend to Suppuration, all the rehears'd Symptoms will be exaſperated and changed for the worſe; whence we learn that a Change of our topical Applications are thereby indicated for thoſe call'd Suppuratives, whereof hereafter in their proper Place. In the Interim, it will not be amiſs to take Notice, that in the Declination of inflammatory Tumours, *&c.* ſeeing ſome unexpected Accidents do often occur, not eaſily to be remedied by Art, it will be expedient, and highly requiſite, to follow the good Counſel of *Fallopius*, who adviſeth us in theſe and the like Caſes, to begin always with the milder Tribe of Diſcutients firſt, and then gradually proceed to thoſe more ſtrong, as you ſee Occaſion; for otherwiſe you may endanger an Induration of the Part, by rarifying and evaporating the thinner Portion of the Humours, ſo that the Reſidue acquires ſuch an obdurate and even irremediable Hardneſs, that, as *Galen* expreſſeth it, the ſame can neither be reſolved by Diſcutients, nor ſuppurated by Digeſtives. *Lib.* 2. *cap.* 7. *ad Glauc.* the like is declar'd by *Aetius*, and further is confirm'd by the familiar Examples we have from the illuſtrious *Boerhaave*, who hath ſhew'd that the Blood and Serum will reſolve and liquify by a moderate Degree of Heat, when concreted;

concreted; and *è contra*, by a more violent and intenſe Heat, they will convert into a membranous Subſtance, like Parchment or Horn, not eaſily reſolvable again by Water or Salts: To avoid which, the milder Remedies do uſually ſupply the Place of the more ſtrong, unleſs in ſome particular Caſes and Circumſtances as lately recited, and even there, the additional Warmth of the Remedy (being uſually applied pretty hot to the affected Part) may in ſome meaſure compenſate the Deficiency or Want of Heat; as Monſieur *Tauvry* hath very juſtly remark'd, that the actual Heat will help to prepare and open the Pores, and alſo actuate and ſtir up the elementary Principles of the Ingredients to penetrate and attenuate the Humours the more powerfully, and thereby prove equally ſerviceable with the ſtronger Remedies: But when theſe diaphoretick Diſcutients ſeem abſolutely neceſſary, it will be convenient to mix therewith (eſpecially when a notable Hardneſs is perceiv'd in the Part) a due Portion of emollient Ingredients, in order to mollify the Induration, and afterward diſcuſs it: Whereto alſo it may ſometimes be neceſſary to adjoin ſomething of an inciding and penetrating Faculty, ſuch as the *Sap. Caſtil. Acetum acerrim. vel Lixiv. fort. &c.* whoſe cutting ſharp Particles are very ſuitable to divide and break in Pieces the harden'd Matter of groſs and viſcid Concretions, and thereby prepare and fit it for the active and ſubtil Principles of the other Remedies to work upon it the more ſpeedily and effectually towards its Reſolution and Diſſipation: Which Method I have frequently experi-

enced to be of great Efficacy in the Cure of obdurate and rebellious Tumours that difficultly yielded to other topical Adminiſtrations.

To conclude, When the Matter flows with ſuch an Impetus or Violence as to threaten a Putrefaction or Corruption of the Member, by ſuffocating the natural Heat, and ſo inducing a Gangrene, the Uſe of diſcutient Remedies are then to be avoided, by reaſon of their heating and attractive Faculty, whereby they would be apt to draw down more Humours upon the affected Part than cou'd be diſcuſs'd thereby, and ſo neceſſarily increaſe and heighten the Putrefaction; in which Caſe, we are in lieu of them to ſcarify the Place, in order to evacuate the conjunct Matter, according to the Advice of *Galen*, *Lib.* 2. *ad Glauc. cap.* 9. who commands the ſame Treatment in Carbuncles, and the like peſtilential and malign Tumours, where the Contents are of an aduſt and acrid Nature; as may be ſeen in *Meth.* 14. *cap.* 10.

From what hath been ſaid, may be gather'd a right Notion of this complicate Intention call'd Reſolution or Diſcuſſion; and that the main Deſign of it is to open the Pores, and give a Breathing to the Part, by the Application of Medicaments conſiſting of ſubtil, active, and penetrating Particles. But leſt theſe ſhould by the ſaid Qualities too much ſtimulate the Fibres, or by their Heat rarify the Fluids too abundantly, and ſo produce greater Troubles; the ancient Writers in this Art did with great Prudence command Repellents to be mix'd therewith during the

the whole Augment of the Diſtemper: But after the Fluxion had ceaſed, as in the State and Declination, then mere Digerents or Reſolvents are inſtituted: And farther, leſt in this Stage ſome Error ſhould happen by their too liberal Uſe to the Detriment of the Patient, they cautiouſly have ordered Emollients, as likewiſe inciding Medicaments, to be adhibited, according as the preſent Circumſtances ſhall indicate or require.

Having thus expounded what is needful in relation to this Intention, we ſhall now proceed to the next, which is that of mollifying or ſoftening the Tumour.

CHAP. III.

Of Emollient Medicines.

THE Nature and Quality of theſe Remedies call'd by the *Greeks* μαλακτικὰ, is ſomewhat controverted amongſt Authors. Some would have them to be of a hot and moiſt Temperament; and others of a moderately hot and dry one. The former, to prove their Aſſertion, inſtance in Oil, *Hydrœleum*, the Fat of temperate Animals, and other the like unctuous and oleous Subſtances: The latter, to eſtabliſh their Doctrine, mention Pitch, Galbanum, Ammoniacum, and ſuch-like Emplaſtick Bodies, partaking of a hot and dry Quality.

This Diverſity of Sentiments may partly be reconciled by the Variety of Cauſes, that may

produce an Induration, or Concretion of the Humours; and ſeeing that Emollients are moſt properly adapted to ſoften and remove ſchirrous Effects (whether primarily or ſecondarily ariſing) we ought to begin with an Enquiry into the Eſſence or Generation of that Diſeaſe, in order to diſcover the Nature and Qualities of ſuch Remedies, as are appointed to remove the conjunct Cauſe thereof.

Firſt then, the Authority of *Galen* ought juſtly to have the Preeminence: He tells us, that the Part affected labours under a Concretion, produced by a cold Fluxion of Humours; which concreted Juice, as it is cold and groſs, ought to be cured by ſoftening and reſolving the indurated Matter, and afterward waſting or diſcuſſing the ſame: And this ſeems beſt effected by thoſe Medicaments that partake of a moderate Degree of Warmneſs, ſuch as the gummy Tribe affords us. By Virtue of whoſe tenacious Particles, the Humour (eſpecially its thinner Portion) is kept from too ſuddenly evaporating, and like a reverberatory or circulatory Heat, the ſame is forced back upon itſelf, until the Whole be attenuated and reſolved into a due Fluidity. But this is only to be underſtood of ſuch Tumours, as are more pertinacious and ſtubborn, that reſiſt the Efficacy of the milder and more proper Emollients, and are ſeated in ſome cold, and as it were exanguous Parts; ſuch are the Ligaments, Tendons, *&c.* And alſo where there is no Suſpicion of a cancerous Diſpoſition, or Tendency that Way: For, as *Wecker* judiciouſly remarks, in ſchir-

rous

rous Affects various (and often unlook'd for) Symptoms occur, for which Cauſe the Medicaments are to be adequated to the different Symptoms of the Affects and Variety of the Cauſes; and therefore cannot be reduced to a certain Standard, or ſtated Degree of Quality, ſome requiring one Thing, and ſome another: As for inſtance (ſaith he) when a Tumour is imbued with an aqueous Humidity, the drier Emollients are more neceſſary to waſte the ſuperfluous Moiſture; but, *è contrà*, where an Induration ariſeth from an immoderate Uſe of the hotter Diſcutients, then are the more temperate and humecting Emollients to be applied along with ſome ſuitable reſolving Medicaments, that may breath out the liquefied and diſſolved Humours.

Fernelius, *Jonſton*, *Heurnius*, and ſeveral other Authors of good Account, attribute three ſpecial Cauſes to the Induration of Bodies; as great Dryneſs, Plenitude, and Congelation; each whereof are altered and removed by a different Manner. The firſt, being the Effect moſt commonly of an imprudent or too liberal Uſe of Diſcutients in inflammatory Tumours, muſt be removed by malactick Medicaments of a moderate, warm, and humid Quality (as lately obſerved.) The ſecond, proceeding from a Plethora, requires a due Evacuation to take away the conjunct Cauſe, and therewith the Tenſion and Hardneſs, which may be aſſiſted by proper topical Applications, ſuited to open the Pores, and thereby afford a liberal Tranſpiration to the Parts. The laſt, being ſometimes the Effect of too ſtrong

Repellents or cold ſtupefactive Medicaments immoderately applied, muſt be treated with attenuating Medicaments, conſiſting of warm, ſubtil, and moderate dry Parts, to attenuate or reſolve the congeal'd Lympha, and cheriſh the Tone of the Fibres, that the exceſſive Coldneſs or even narcotick Quality of the repercuſſive Applications had vitiated and aboliſhed.

The ſame Treatment will in like Manner prove effectual, where a Hardneſs ariſeth from a cold groſs Pituita, or viſcid Matter, as remarked in the foregoing Intention. Hence we learn the Cauſe of ſuch a great Variety of emollient Medicines being introduced for one and the ſame Deſign; and although they ſeem to be repugnant, and of a quite different Nature and Quality to one another, yet as they agree and contribute to the ſame Uſe and Service, they may well enough be ranked under one common Denomination.

Yet both the Antients and Moderns do notwithſtanding give the Preference to thoſe Remedies that are of a hot and moiſt Quality. *Avicenna, Lib.* 2. *Tract.* 1. *cap. De rationib. Medicinar. ſingul.* ſpeaking of the Quality of theſe Remedies, delivers his Opinion to this Effect: *Mollificativa* (inquit) *vera Medicina eſt, cujus proprietas ſit, ut ponat Subſtantiam membrorum habentium ſpiſſos poros leniorem, caliditate & humiditate ſua; & accidit ex hoc, ut pori fiant latiores, & expulſio ſuperfluitatum, quæ in eis continentur, facilior,* &c. Which is as much as to ſay, that it is the Nature or Property of a true emollient Medicine, by Virtue

Virtue of its Heat and Humidity, to lenify or ſoften the Subſtance of a Part having cloſe and denſe Pores, whereby they may become more patent or open, in order for a quicker and freer Diſcharge of the ſuperfluous Contents. And of the ſame Opinion is *Galen*, who in *Lib.* 5. *De Simpl. Medicament. Facult. cap.* 3. attributes the mollifying Faculty to Heat conjoined with Humidity; which he farther confirms in *Lib.* 14. *Meth. cap.* 3. and *Lib.* 2. *ad Glauc. cap.* 5. ſaying, that when the Parts are indurated, they are not to be cured by Medicaments of an immoderately drying Faculty, but by thoſe that are of a moderate Heat, with neither too much, nor too little Humidity conjoined: Whence it appears, that mollifying Medicines (properly ſo called) ought to be of a warming and humecting Faculty, according to the Doctrine of the Antients, and ſaving ſome particular Caſes, are better adequated to anſwer the Intention, than the other endued with the ſame Degree of Heat and Dryneſs; and this is evident, both from Reaſon and Experience, how that moſt concreted Bodies (and more particularly thoſe formed by a Congeſtion of the Humours,) will ſooner fuſe and diſſolve by a moderate Degree of Warmth and Moiſture, than where this latter Quality is wanting: The Humidity acting the Part of a Menſtruum in ſolving and melting down the harden'd Maſs, eſpecially when actuated and put in Motion by an additional Warmneſs; as appears very plainly from the Pharmacopœal Proceſſes uſed in the Diſſolution of Bodies, (by Means of a di-

geſting Heat,) how difficult and even impracticable it is to ſeparate and force aſunder the conſtituent Principles of ſome Bodies without the Aſſiſtance of a proper diſſolvent Menſtruum, that may not only divide, but alſo keep from running into mutual Contact, thoſe disjoined Corpuſcles or Atoms, by receiving and ſuſpending them in the Pores of the Fluid; much after the ſame Manner that the harden'd Contents of inflammatory Tumours, are firſt mollified and then render'd liquid and fit for Expulſion by a convenient Treatment, hereafter to be declared: Having firſt taken notice, that as there are ſome Subjects that will not only diſſolve in a convenient Liquor, (or fuſing Menſtruum,) but will likewiſe run, with a moderate Degree of Heat and Dryneſs; ſuch as the bituminous, gummy, or reſinous Subſtances, that will melt by the Heat of the Fire or Sun; it may not be improbable, but that ſometimes (tho' perhaps very rarely,) Concretions may be formed in ſome Parts of the human Body, that may bear ſome Analogy or Reſemblance thereto. Examples of the like Kind may be met with in the Obſervations of *Hildanus* and others; which very likely *Fallopius* had ſeen in the Courſe of his Practice, and thereby was induced to adviſe the Reſolution of a ſchirrous Tumour after the ſame manner that the Sun acts upon liquefiable Bodies. For, ſaith he, Wax ſoftens and melts away by the Heat of the (Fire or) Sun. So therefore ought malactick or emollient Medicines to be temperately hot; according to the Appointment of *Galen*, who

who in the ſaid Affect laid this Simile as a Rule to be obſerved: Which makes me apt to ſuppoſe that if ſuch kind of Concretions be to be found at any Time in a human Body (as doubtleſs they are) they muſt proceed from the oleaginous or ſulphureous Parts of the Blood, mixed with the tartarous or earthy Feculencies thereof; which being incapable of paſſing thro' the Pores, or being diſperſed by inſenſible Tranſpiration along with the thinner and more ſubtil Humours, remain there impriſoned in the Part; when having parted at laſt with the more watry or ſerous Portion of the Fluids, they unite and concrete into a hard plaiſtery Subſtance, even as Oil and Litharge by due Coction coaleſce and acquire the Form of an Emplaiſter. The like may be performed by an Acid mixing with the ſulphureous Part of the Humours; for Dr. *Grew* hath obſerved, that a Mixture of Oil Olives and Spirit of Nitre digeſted together for ſome Days, will by degrees become of the Colour of Marrow, and at laſt congeal and harden into a white fatty Subſtance, that will diſſolve only by the Heat of Fire; and that there is both an oily and acid Humour ſometimes preternaturally abounding in our Bodies is unqueſtionable, and might be proved from the Authorities of many eminent Perſons, and undeniable Facts, if Time and Place would permit, Which for Brevity ſake I ſhall paſs over, taking it for granted. And if ſo, 'tis in this Caſe then, that the more hot and dry Emollients are chiefly of Service. I ſhall now proceed

ceed to explain ſomething more particularly their Uſe and Virtues.

The firſt I have already ſpoken of in the former Chapter; having obſerv'd, that in all Tumours (Cancers only excepted, and thoſe bordering thereon) where the Matter becomes hard and concreted, emollient Medicaments are to be applied. Eſpecially when an inflammatory Swelling tends to a ſchirrous Diſpoſition; yet ſeldom or ſcarce ever are they uſed ſimply or alone, but for the moſt part mixed with ſome ſuitable Diſcutients, in order to evacuate what is mollified, leſt otherwiſe the Tumour being ſoften'd, without diſcuſſing, the contain'd Matter ſhould grow hot and corroſive, and thereby acquire a cancerous Nature; as *Ballonius Conſil. Lib.* 1. hath well obſerved, that ſchropulous Swellings, *&c.* have by improper Applications degenerated into a Cancer. And on the other hand, too ſtrong Diſcutients (adhibited *per ſe*) are no leſs dangerous; for where they cannot diſcuſs the whole Matter, or harden'd Pituita, they either exaſperate the Malady by exciting a preternatural Heat and Fermentation in the Humours: Whence may enſue the recited unhappy Accident, or at leaſt an intractable Induration that cannot afterward be overcome or removed by Art. Therefore the good Counſel of *Aëtius* ought alway to be regarded, who in theſe Caſes, (*i. e.* when any Hardneſs begins, and the Senſe of Feeling ſtill remains) adviſeth the Uſe of ſuch Applications as partake both of a diſcuſ-

ſive

ſive and emollient Faculty, for Reaſons already given; beginning with the Emollients firſt, and then proceeding to Diſcutients, mixing them by degrees one with the other, according as the Habit of the Body, and Condition (or preſent State) of the Tumour ſhall direct; which according to his Authority are equally to be conſider'd.

Hollerius, who hath gone farther upon this Subject, hath, from the aforeſaid Author and the ancient Doctors, (with whoſe Writings, to his great Honour be it ſpoken, he was well converſant) collected ſome certain Rules for us to direct our Practice by. *Firſt*, We are duly to conſider how far the affected Part hath receded from its natural Temper and Symmetry, that ſo we may apply a due or equivalent Remedy. 2*dly*, It behoves us rightly to diſtinguiſh the Nature of the Parts: And *Laſtly*, That we artificially collect after what Manner we are to mollify, that is, whether we are to mix deterging, reſolving, or inciding Ingredients, with our mollifying Applications; in all which we are to conſider the Manner and the Occaſion of the preſent Indications, as likewiſe the Quality and Quantity of the Medicaments: For, ſaith he, there are ſome ſchirrous Tumours that are deplorable, and even deſperate, reſiſting the Efficacy of the moſt powerful Remedies; ſuch are thoſe that are grown hard and utterly inſenſible, being ſmooth, and without Hairs: But where the ſchirrous hath ſome Senſe of Feeling left, although it be obſcure and dull, yet is there Hope of Curation by proper emollient Medicaments mix'd with a due Portion of Reſolvents

more

more or leſs, according as the preſent Exigency ſhall require; which may be gather'd from the Hardneſs of the Tumour, and other Circumſtances thereto relating. As for Example, when a phlegmonous Tumour begins to contract it ſelf, and grow hard, and the Senſe or Perception of Feeling in the Part is not quite obliterated or aboliſh'd, then the milder Emollients, mix'd with the like Diſcutients, are to be us'd, (if there be no Suſpicion of a latent Malignity) which principally regards the firſt Conſideration. 2*dly*, As to the Nature of the Part. When the Induration is ſeated in a muſculous and fleſhy Part of the Body, it is reſolv'd by milder Medicaments, than when it is fix'd in the Ligaments and Tendons; the Method of Cure being then converted to the ſtronger and warmer Kind. A like Regard is to be had to the different Temperament of Perſons; for thoſe of a compact and firm Habit, will ſtand in need of the ſtrongeſt and moſt powerful Remedies, whilſt the effeminate and tender will diſpenſe with the weaker Tribe.

Laſtly, As to the Tumour it ſelf, when 'tis become obdurate and contumacious, the Matter groſs and pertinaciouſly concreted, ſeated upon the cold ſimilar Parts, as the Ligaments, Tendons, *&c.* where the natural Heat is very languid, and by Reaſon of the Obſtruction of the Veſſels and Glandules, even almoſt extinct; not only the warmer Emollients and Diſcutients are in this Caſe abſolutely neceſſary to rouze up, if poſſible, the active Principles of the Humours into Motion; but alſo ſomething of an inciding and penetrating Faculty,

Faculty, muſt be conjoin'd, according to the Advice of *Galen*, *Lib.* 2. *ad Glauc. cap.* 4. who in the like Circumſtances orders inciding Medicaments to be mix'd with Emollients, as Gum Ammoniacum diſſolv'd in Vinegar, *&c.* upon account of the inciding and penetrating Faculty that the ſoluted Gum acquires from the Vinegar, whereby it is render'd capable of dividing the Particles of the moſt compact and obdurate Bodies, and afterward of diſſolving and diſperſing them. Even the Fume or Vapour of that acid Liquor, is of approv'd Service, in reſerating the obſtructed Tubes, and ſetting open the Avenues of Perſpiration, block'd up by a harden'd and groſs Pituita, due Preparatives being firſt premis'd; that is, the Part muſt firſt be mollify'd by ſoftening Applications, before the Vinegar can ſafely be applied, leſt otherwiſe it evaporate the thinner Portion of the Humours, and leave the Reſidue more groſs and fix'd behind. And for that Reaſon 'twas forbid by *Galen* to be us'd in the Beginning of a Schirrus, unleſs mix'd with Emollients; ſuch as the *Ammoniac. Colat. &c.* or in lieu thereof, a reſolving and mollifying Vapour (if judg'd more proper) may be prepar'd, of the Leaves of Mallows, Marſhmallows, Pellitory, Chamomel Flowers, *&c.* boil'd in Oxycrate, with a Portion of diſcutient Ingredients, wherewith the Part may be fomented, until a Heat or Redneſs appear therein; which may be promoted by ſtrong Friction, and afterwards cover'd up with a mollifying and reſolving Cerote or Cataplaſm, to diſperſe and conſume the Remains of the Diſtemper, (this Me-

thod may be repeated until all the Hardneſs be waſted;) the Reaſon of which Proceeding may be deduc'd from *Galen*'s Comment upon *Aph.* 24. *Sect.* 1. where he ſaith, that the Humours are firſt to be prepar'd and made fluxile, that is, thin, and partaking of no Lentor; and the Paſſages through which the Evacuation is to be perform'd, are to be open'd, and have no Obſtruction in them. The ſame moſt excellent Counſel our illuſtrious Author farther inculcates in *Comment. Aph.* 9. *Sect.* 2. ſpeaking to this Effect, *viz.* where there is any groſs or glutinous Matter reſiding in any Part of the Body, it is to be made fluid, in order for its Diſcharge, by reſerating all the Pores and Paſſages, and likewiſe by inciding and abſterging the Humour.

Thus the great Phyſician pathetically explains the Manner of treating all viſcid Concretions, wherever lodg'd in the Body, whether internally or externally; a Subject ſo uſeful and beneficial, that all Practitioners have paid a due Regard thereto, even from the Time of *Hippocrates*, who commanded the Humours firſt to be made fluid, and the Paſſages permeable, before an Evacuation ſhould be attempted. For otherwiſe the Obſtruction will become greater, and the Diſeaſe more exorbitant; as is evident from theſe harden'd Tumours, how prone they are, by a prepoſterous or wrong Management, either to degenerate into a cancerous or ſchirrous Diſpoſition; to avoid which, thoſe excellent Men of old have not only inſtituted ſeveral cautionary Precepts for our Inſtruction, (and as it were chalk'd out the Road to Practice)

but

but alſo have appointed an ample Stock of Medicines to combat againſt the Diſtemper and its ſupervening Train of Accidents. *Galen* hath divided this Claſs into three Degrees or Orders; the firſt of the emollient Kind, is the Fat and Marrow of domeſtick Fowls, Butter, Oil, *&c.* the ſecond is yet ſtronger, being the Suets and Fats of wild Fowls and Quadrupeds; the third, and ſtrongeſt, is the Fat of voracious Animals, or Beaſts of Prey, including all the gummy Bodies; as Ammoniacum, Galbanum, Bdellium, Styrax liquid, *&c.* Amongſt the vegetable Simples, are likewiſe collected a great Number, that are alſo rank'd according to their Degrees; but as many of 'em rather belong to other Claſſes, I ſhall paſs over the major Part, and only inſert a few of ſuch as ſeem moſt proper for this Intention; of which Sort, are the Leaves of Mallows, Marſhmallows, Flowers of Chamomel, Melilot, and Elder; Seeds of Fenugreek and Linſeed, Figs, Jujubs, Liquorice Root, and, in general, all ſuch Things as will yield a ſoft and inſipid Mucilage, which *Fernelius* notes as one of the true Criterions or characteriſtick Marks of theſe Medicaments; agreeing in the main with *Weckerus*'s Definition, who ſaith that emollient Remedies are of a temperate (warm and humid) Quality, and of an aerial Nature, as may eaſily be known by the Taſte or Touch; for they are of a fatty, oleous, and ſweetiſh Sapor, devoid of all Acrimony, Auſterity, Saltneſs, or any other vehement Quality, whereby either Adſtriction, or Exceſs of Heat or Coldneſs, may be denoted. Neither is there any Aſperity, Glutinoſity, or Ad-

heſiveneſs, perceptible by the Touch. Theſe are the Marks whereby the aforeſaid Authors have pointed out to us the true or more temperate Emollients, pretermitting the ſtronger Tribes, as more properly appertaining to other Diviſions: Amongſt the Compounds, we meet with the *Ol. Amygd. dulc. Lini, Chamæmel. Aneth. Ol. & Unguent. Sambuc. Dialth. Empl. Melilot. è mucilag. cerat. ex Ammoniac. Hydræleum*, and ſundry others that may be pick'd out of the officinal Preparations. Whereto may be added, amongſt the ſtronger Kind, the *Empl. è Cicat. cum Ammoniaco Diagalb. Crocat. de ranis cum Mercurio, Unguent. Agripp. Artenit. Martiat.* with the Cataplaſms of roaſted Figs, Onions, Squills, *&c.* malax'd with ſome penetrating oleous Subſtance, to give them their due Conſiſtence; together with many more of the like Nature and Quality: But as moſt of this Sort, on account of their complicate and extenſive Virtues, do uſually fall under another Section, whereto they challenge an equal Affinity, I ſhall defer any farther Deſcription of them here, and proceed to enquire into the Uſe and Virtues of thoſe Remedies which cloſe the laſt Stage of a Tumour.

CHAP.

CHAP. IV.

Of Suppurative Medicines.

WHEN the Tumour hath proceeded through all the recited Stages, and in Oppoſition to all Endeavours (as frequently happens in great Phlegmons and other violent Fluxions) it haſtens a-pace toward its State or Vigour, from whence an Apoſtemation muſt conſequently be the Iſſue, the Uſe of repelling and reſolving Medicaments are then wholly to be laid aſide, as of little or no Service; the whole Intention of Cure turning upon the ſuppurative Tribe, with a Deſign of aſſiſting Nature in the Concoction and Tranſmutation of the crude Sanies into the Form of laudable Pus or Matter.

For, as *Galen* obſerves, Suppuration is not the mere Work of Nature, as is the Generation of Fleſh, neither ſolely of Medicines, as is the Corroſion and Exeſion of it, but is the Reſult of both, *i. e.* partly of Medicines, and partly of Nature.

Therefore when through any accidental Cauſe Nature cannot duly perform its Part, either in throwing off the ſuperfluous Humours through their proper Emunctories, (or ſecretory Organs) or on the other Hand in concocting them to a more innocent and inoffenſive Subſtance; a Neceſſity ariſes of calling in the Aſſiſtance of Art, that by the Mediation of proper Remedies (ſuch

as theſe we are diſcourſing of) the Concoction of the acrid and putrefactive Contents may be promoted, and haſten'd forward, in order to avoid thereby too great a Conſumption and Waſte of the Solids, that daily are prey'd upon by the offending Humours, until a due Diſcharge be made thereof, either by Knife or Cauſtick.

To form a better Idea whereof, (according to the ancient Doctrine) we are to know, that *Galen Lib.* 1. *De different. Febrium, cap.* 6. and *Lib.* 5. *De Simpl.* and in ſeveral other Places, hath appointed a twofold Heat in all inflammatory Caſes, the one natural and benign, conſerving the Parts in their due Temperament, the other preternatural, and inimical to the whole Animal Œconomy, generally ariſing from Fluxions and Extravaſation of the Humours, which putrefying and growing hot, become altogether adverſe to the ingenite natural Heat; from whence a mutual Conflict ariſeth, that terminates in a good or bad Event, according to the Predominancy and Victory the one bears (or has obtain'd) over the other. For if the natural Heat hath prevail'd, then an Extermination of the heterogeneous is effected by inſenſible Tranſpiration, as frequently is ſeen in ſmall Inflammations terminated by Reſolution or Diſcuſſion. But *è contra*, if the preternatural extraneous Heat hath overcome and got the Maſtery, then a Corruption and Deſtruction of the Part may be fear'd by a Gangrene, the too common Effect of great Fluxions and Inflammations. Which made *Galen* in theſe Caſes command the Part to be ſcarify'd, to evacuate thereby a Portion

tion of the conjunct Matter that produc'd the Diſtemper, and likewiſe to give a Breathing to the affected Member, which the effervescent Blood, and inflammatory Heat thence ariſing, had even ſuffocated and choak'd up.

But if in this Conflict their Forces be equal, ſo that neither of them exceeds in Temperament, then from this mix'd Action reſults a neutral Event, *viz.* neither a Reduction of the Part to its natural State and Diſpoſition, nor a total Corruption and Putrefaction thereof; but a Suppuration of the purulent Matter; which appears always more or leſs white and uniform, according as the natural Heat hath prevail'd, and the Concoction ſucceeded.

For the Promotion whereof, ſeveral Remedies are appointed by Phyſicians, which are uſually divided into two Degrees or Orders; the one of a temperate Heat and Humidity, analogous to the human Temperament, whereby they are ſaid to promote the Concoction or Maturation of the extravaſated Humours, in aſſiſting and augmenting the natural Heat of the Part whereto they are applied: As appears from *Lib.* 5. *De Simpl. Medicament. facult. cap.* 8. where the aforeſaid Author, ſpeaking of the Nature and Quality of theſe Medicaments, is pleas'd to define them after this Manner:

Eſt autem (inquit) præpoſitum definire, qualis ſit univerſa pus moventium natura. Dictum autem eſt, quod modicè humectantem & calefacientem eſſe oporteat, quod in aliis verbis eſt, ut neque excellat temperiem corporis ipſam immutantis, neque ab ea deficiat,

ſed quoad fieri poſſit ſimile ſit. The Reaſon why ſuch a Similitude of Temperament is requir'd in this Work, ſeems to be deduc'd partly from the Mode or Manner that Nature takes in performing the common and daily Concoctions in the Body, which is beſt effected by a moderate Heat: For as this Quality ſuperabounds, or is deficient, the Nutrition and Reparation of the Parts ſuffer accordingly; as is evident in febrile Diſpoſitions of the Blood, and Inflammations of the *Viſcera*, where the concoctive Faculty is quite aboliſh'd by the preternatural Heat accended in the Humours. And on the other Hand, where the native Heat is weak and languid, Crudities are wont to ariſe inſtead of true Concoction: The flatulent Belchings, and other windy Eructations, with rumbling of the Bowels, and Inflation of the Hypochondriæ, (uſually attending old People, whoſe concoctive Faculty, through want of natural Heat, is generally very weak and infirm) plainly denote the Crudities affecting thoſe Parts ariſing from the aforeſaid Cauſes; which *Valleſius* being well appriz'd of, affirms, that the more temperate theſe Qualities are, the better they anſwer this Intention. For (ſaith he) 'tis true indeed that they operate or concoct the more ſlowly, but then they work the more ſurely, and make the better Pus, becauſe they approach nearer to the Nature of the Part; and the further they recede therefrom, they become more putrefactive, by reaſon an Exceſs in theſe Qualities is always accounted (and from common Experiments daily occurring further confirm'd) to be the very Parent of Putrefaction;

trefaction: Therefore as we deſire only a Converſion of the crude Humour into Pus, and not a Corruption and Putrefaction of the whole Member; temperate, humecting, and calefying Medicaments, are choſen for this Intention, although a great Allowance is made for the Diverſity of Temperaments, both in Bodies and Parts, as well as the Nature and Quality of the Tumour, or its offending Contents; on which Account other Medicaments are preſcrib'd of a ſomewhat ſtronger Nature or Quality, partaking of a viſcid and tenacious Subſtance, call'd therefore by *Galen Infarcientia*, as deſign'd to ſtop up the Pores by their glutinous Contexture, and thereby prevent the Evolition and Diſperſion of the more ſubtil and fluid Part of the Humours, that by all Endeavours ought to be reſtrain'd. For in this Caſe we are to act counter to Diſcuſſion, which required the Humours to be attenuated and ſubtiliz'd, and the Pores and Paſſages likewiſe reſerated or ſet open for their Evaporation, effected by Medicaments conſiſting of penetrating, ſubtil, and thin Parts; and that they might operate the more effectually, a liquid Conſiſtence, as Fomentations, Epithems, Embrocations, *&c.* are uſually made choice of in order to avoid all Accidents that might ariſe from obſtructing the cutaneous Pores, and thereby thwart the main Intention of Diſcuſſion.

But here, contrariwiſe, we reject all attenuating, aperient, and penetrating Ingredients, as likewiſe the Forms of Medicines that might contribute to that Deſign; and inſtead thereof ſub-

ſtitute emplaſtick Compoſitions, form'd of groſs, mucilaginous, and unctuous Subſtances; that may ſhut up the Pores of the tumify'd Part, and hinder the Evaporation of thoſe ſubtil Effluvia, wherein, as Authors ſay, the native Heat conſiſts, and conſequently whereon the concoctive Faculty of the Parts depend. Therefore, ſaith *Fallopius*, this thin vaporous Subſtance, which continually exhales and flies off from the Maſs of Blood (ſeeing it is the efficient Cauſe of Concoction) ought to be conſerv'd, (be it weak or ſtrong) and the Efflux of it prevented by proper topical Applications, ſuch as thoſe we are now treating of, which by the Cloſeneſs of their Texture, and the Adheſiveneſs of their Parts, together with the Form of Application made uſe of in this Caſe, ſuch as Cataplaſms, Cerots, Emplaiſters, *&c.* (Medicaments of a groſs Conſiſtence, and tenacious Faculty) are excellently ſuited for this Intention.

Whereas all thoſe that are of a contrary Quality, muſt certainly be prejudicial, and repugnant to this Work. Hence comes the *Farin. Fabar. Hord.* and other Ingredients of a lax and open Contexture, to be forbid here, together with thoſe that in any Manner contribute to open the Pores, and thin the contain'd Humour, whether by virtue of their own Quality or Compoſition; which latter is ſometimes of greater Regard than the preceding: For if the Medicament (although compounded of the moſt efficacious Ingredients that fall under this Denomination) be apply'd in any liquid Form, even in thoſe of Cataplaſms or Emplaiſters,

Emplaiſters; or if the ſame do not adhere pretty cloſely to the Part, the whole Deſign is ruin'd, by permitting the Effluvia of the Blood or Humours to paſs through their Poroſities, or elſe to ſlip away, betwixt the Surface of the Cutis and the Application: For which Cauſe the Pultiſſes, Plaiſters, and the like Dreſſings, are to be reduced to a due Conſiſtence, ſo as they may adhere the cloſer to the Skin, and ſtop up the Perſpiracula of it, whereby the fugitive or volatile part of the Fluids, being thrown back upon the remaining groſſer Portion, will prevent their Induration; and alſo act as a proper Solvent in concocting and tranſmuting the ſame; whilſt the potential Warmth of the Medicine ſerves as a Balneum or digeſting Heat to forward the Work; without which two Requiſites, it were almoſt ſcarce poſſible to be effected.

In the Uſe of theſe Remedies, the ſame Regard is to be had, to the Age, Sex, Conſtitution, and Temperament of the Whole, as well as of the Part affected; together with the Nature and Condition of the Tumour itſelf; as was required in the foregoing Intentions; without a due Obſervance whereof, ſeveral unlook'd for Accidents will accrue: For it cannot be ſuppoſed that the Bodies of Women, and Children, with others of a ſoft and tender Habit, can equally bear the Force of the ſame Remedy, that is adequate or fit for thoſe of a contrary Temperament and Diſpoſition; ſuch as labouring, and ſtrong Perſons, whoſe Skin is denſer, and more compact, the conſtituent Fibres harder, and more reſiſtable,

and conſequently ſuch as muſt ſtand in need of more powerful Applications to make them yield to the contained Matter now forcing its way therethrough; whence came that true Remark of *Galen*, in relation to different Habits, that a Medicament which is ſarcotick in ſome Bodies, will become ſuppurative in others. The ſame is alſo applicable to the different Nature and Situation of the Effect, wherein a like Difference is obſervable; it being common to ſee, a ſimple Phlegmon to ſuppurate of itſelf, or even by the ſlighteſt Remedy; whereas the complicate Kind proves often untractable and obſtinate to the moſt powerful Applications, and the deeper it is ſeated, ſtill the more difficult to be dealt with. Therefore the Strength of the Remedy is alway (by the general Conſent of Practitioners) to be proportioned to the Magnitude of the Diſeaſe, and the Urgency of the preſent Symptoms; which in this State are ſometimes ſo exorbitant and even intolerable, eſpecially the Pain, that laying aſide the main Intention, (in order to prevent worſe Conſequences) we are obliged to mitigate or appeaſe this dolorous Senſation as much as the preſent Circumſtances will allow, by ſubſtituting (or at leaſt mixing with our ſuppurative Ingredients) ſome anodyne, relaxing, or mollifying Medicines, that may abate the Pain, and relax the hard and rigid Fibres, to give way to a greater Diſtention: And with this View it is, that many of this Tribe have entred the ſuppurative Claſs, which truly make up a great Part of the more temperate and weaker Kind; ſuch are all unctuous, oleous, and

muci-

mucilaginous Subſtances, that generally have a large Share in this Intention; there being ſcarce any Cataplaſm or Cerote formed for this Uſe, that does not admit of ſome mollifying and relaxing Ingredient into its Compoſition, whereby a double Benefit accrues. Firſt, by reaſon of their oleous or unctuous Subſtance they ſtop the Pores, and ſo act the Part of a true Suppurative. And ſecondly, by virtue of their relaxing Faculty they ſupple the Rigidity and Tenſeneſs of the Solids, and thereby take off the ſenſe of Pain, and become truly anodyne; and which is yet further of Service, they impart a due Conſiſtence to the Application, rendring it ſoft and eaſy to the grieved Part, that otherwiſe would prove too ſtiff and troubleſome. Hence comes it, that the *Ol. Lini, Lilior. alb. Armigd. dulc. Axung. porcin. farin. Sem. Lini, Fænugr. Vitell. Ov. fic. ping. Croci*, and many others, enter theſe Compoſitions. And upon theſe Conſiderations it was that *Wecker* affirm'd the Affinity betwixt Emollients and Suppuratives to be very great. For truly (ſaith he) there is the ſame Heat in both, that is, temperate, and correſponding to that of the Parts whereto they are applied; the only Difference reſiding and being manifeſt in the Effects. To this *Valleſius* and ſeveral other learned Men give their Aſſent, ſuppoſing their Limits to be circumſcribed by a very ſlender and weak Diviſion, which we by Experience find to be true. For they will act either Part, according to the different State of the Tumour, and Management of the Application; as for Example: If they be applied

applied Emollient-wiſe, to an indurated or harden'd Tumour, they will, by virtue of their mollifying Faculty, ſoften the concreted Matter, relax the tenſe Fibres, and thereby ſatisfy that Intention: Whereas, *è contra*, if adhibited as a Suppurative to ripen a Phlegmon (advanced to its State) the unctuous Quality, by ſtopping the Pores and conſerving the natural Heat, will promote the Maturation of the Tumour, and thereby become equally as ſerviceable for this Deſign. From whence it appears, that theſe different Modes of Operation reſult chiefly from the different Form, Manner, and Time, of Application; which doubtleſs Mr. *Tauvry*, a very intelligent Author, had in view, when he tells us, that if by the Uſe of theſe Medicaments, the Humours be render'd fine enough (by means of a ſuppoſed Fermentation) to retire to the Veſſels, or to penetrate through the Pores of the Skin, and ſo paſs off by Tranſpiration, then they diſcuſs: But if the Humours are groſſer, and cannot have ſuch a Vent, then they break thro' the Skin by virtue of their Fermentation, and come forth in the Form of Pus.

But this falls under the ſame Reſtriction and Conſideration as the foregoing; *viz.* the different Stage of the Tumour wherein they are applied: For when the Humours are converted into Pus, I am inclined to believe, that it will be found very difficult to reſolve the extravaſated and putrified Blood, to ſuch a degree of Fluidity, as is requiſite to fit it for paſſing off by the finer Secretions; or even of being received again, by the

the recurrent Veſſels; whoſe minute Orifices by this Time (tho' before ruptur'd or dilated) muſt be perfectly agglutinated; as is evident from the Apertion of ripen'd Abſceſſes, wherefrom iſſues nothing of Blood, but only a purulent or concocted Matter; which confirms my Aſſertion, notwithſtanding the Authority that may be produced againſt it: For I am not ignorant, that many very learned Men (paſſing over ſome of the renowned Antients) give into the former Opinion: Whereof *Guido*, and from him *Tagaultius*, are the moſt principal; who diſcourſing upon this Subject, delivers his Sentiment in this Manner.

Cæterum Abſceſſus ipſi nonnunquam per halitum digeruntur, hoc eſt, per reſolutionem terminantur, nulla tunc in Cute facta continui Solutione; ubi ſcilicet Pus, & modicum eſt, & bonum; tenue quoque & non in alto deliteſcens. But that this is very rare, is acknowledged by the ſaid Authors in the following Words: *Sæpius tamen facto à Naturâ vel arte emiſſario conceptus humor profunditur, quam digeratur, reſolvaturve.* Upon which Authority, ſtrengthen'd by a like Inſtance from *Amb. Parey*, *Riverius* hath inſerted amongſt his Obſervations a Hiſtory communicated by Mr. *Pomaret* a Surgeon at *Montpelier*, who affirms that he cured a ſuppurated Abſceſs by Reſolution: But the requiſite Conditions that he induceth for it, *viz.* that the Matter ſhould be ſmall, thin, and ſerous, does not at all prove that Pus was made, but rather that the Humours were in a State of Crudity, and therefore capable of Rarefaction and Diſcuſſion;

cuſſion; which on the other hand can only be remedied by letting it out.

For as *Fabrit. ab Aquapend.* a moſt accompliſh'd Surgeon, hath juſtly remark'd, that when by the Signs Suppuration is known to be perfected, an Indication ariſeth of evacuating the extravaſated Matter; becauſe in that State, it is incapable of being driven back again by any of the preceding Intentions; and grant it could, yet ought it not to be attempted, leſt it ſhould recur upon ſome noble Parts.

Which Doctrine, as it is grounded upon Reaſon and Experience, ought duly to be regarded by all thoſe who would attempt the Reſolution or Diſcuſſion of ripen'd Matter, ſeeing it hath a fairer Chance of being abſorbed by ſome of the fretted or ruptur'd capillary Veſſels, than of being breath'd out through the obſtructed Pores. Whence I conclude, that if the ſame was practicable, yet is it hazardous and dangerous to the whole animal Oeconomy. For if the putrid Matter ſhould chance to fall back upon the Maſs of Blood, whereto in this Condition it is heterogeneous and inimical, it might, by raiſing a putrid Ferment therein, produce moſt pernicious and even fatal Conſequences; as commonly is the Product or Iſſue of internal ruptur'd Abſceſſes, for the Secretion of whoſe Contents, Nature hath appointed no ſecretory Organ. Therefore ſeeing ſo great Danger is imminent from this Method, and ſo little (or even no) Hazard to be incurr'd by opening Apoſtemations, we need not to heſitate, whether of the two ought to be choſen; but

but may conclude, for a final Determination, in the Words of Dr. *Freind*, that when Pus or Matter is once made, it is certain, that no Art can give it Cure, but by letting it out.

In order whereto theſe ripening Medicines are appointed as a Preparative, whereof there are two Kinds, as lately obſerved, the one weak and the other ſtronger: Under the former may be reckon'd the recited Emollients, whereto may be annexed ſeveral others borrow'd from that Claſs, ſuch as the Leaves of Mallows, Marſh-mallows with its Roots, Pellitory, Violets, Wheat-flower, Hogs-lard, roaſted Figs, and the like, deduced from the foregoing Catalogue. The ſecond and ſtronger ſort, term'd Emplaſticks, comprehend moſt of the gummy, mucilaginous, and other Subſtances, of a viſcid and clammy Conſiſtence, that neither to taſte or touch denote any Exceſs of Heat, or Aſperity; ſuch are the Roots of white Lillies, roaſted Onions, Butter, Leaven, the Fat of Fowls and Quadrupedes, Wax, Roſin, Pitch, Gum, Galbanum, Ammoniacum, Bdellium, liquid Storax, Frankincenſe, Labdanum, Flour of Linſeed, Fenugreek, *&c.* whereto theſe officinal Compounds may be adjoined, *viz.* The *Ung. Baſilic. Dialth. Empl. Melilot. é Mucilaginib. Diachyl. magn. cum Gum.* and the reſt of the gummy Plaiſters and Cerots may not improperly be admitted into this Intention.

Theſe latter are chiefly of Service where the Tumour is profound or deeply ſituate; the Matter groſs or complex, as in an œdematous Phlegmon, where a pituitous or ſlimy Lentor embarraſſeth

raſſeth the more fluid Humours; the Part alſo of an obtuſe Senſe, cold Temperament, and the Skin hard and denſe; theſe concurring in an adult or robuſt Habit, indicate the Choice of the ſtrongeſt Remedies, as the contrary Circumſtances do the more mild. The moſt commodious Time of Application, is when the Tumour is advanced to its full State, and there is no Hope left of evacuating the offending Contents, otherwiſe than by ripening them and letting them out by a manifeſt Diſcharge. Which State of the Diſtemper is by *Galen* 1 *de Criſi* deſcribed to be the moſt vehement Part of it, the Symptoms then being all at the height, and the Tumour itſelf advanced to ſuch a degree of Magnitude, beyond which it can proceed no farther.

But the more apparent Tokens of a ſuppurated Abſceſs, *Guido* from *Avicenna* (the *Arabian*) delivers in a very conciſe and intelligent manner, ſaying, "When thou ſeeſt the Pulſation and Hard-"neſs long protracted, and likewiſe that the Pain "and Heat increaſeth, thou may'ſt then ſuppoſe "that an Apoſtemation is the next Thing, or that "the Abſceſs will turn into Suppuration, and "make its Exit that way." Whereto likewiſe may be added the Symptomatick Fever, which then exacerbates with frequent rigors and light Shiverings upon the Converſion of the crude Humour into Pus; whereof the Prince of Phyſick long ſince took notice, as appears from that remarkable Apphoriſm of *Hippocr.* 27. *Sect.* 2. which ſaith, *Dum pus conficitur, dolores atque febres accidunt, magis quam jam confecto.*

Theſe

Theſe being the Forerunners of an approaching Suppuration, indicate the Time and Uſe of theſe maturative Applications that are appointed to aſſiſt Nature's Endeavour in concocting and ripening the extravaſated Humours; which, by the unanimous Conſent of the Learned, is allowed to ſucceed beſt in thoſe Tumours ariſing from Blood call'd phlegmonous or inflammatory; for pituitous cold Swellings hardly admit of this Treatment: And if at any Time they do chance to ſuppurate, they are for the moſt part crude, and long in digeſting, leaving an Ulcer of an intractable and malign Nature; as the moſt excellent *Ballonius* hath obſerv'd in the like Caſes, *viz.* that ſcrophulous Tumours being ſuppurated, have turn'd into cancerous Ulcers. The ſame Caution is of Force in all the Tumours partaking of a bilious or melancholick Diſpoſition, thoſe Humours having a peculiar Tendency that Way when mov'd or put into a preternatural Heat and Ferment, (by a prepoſterous Uſe of theſe moiſtening and heating Remedies) as too plainly appears from the unhappy Effects attending ſchirrous Tumours, when they fall under a like Management; the latent malign Quality being thereby rouz'd up, breaks forth very often into a raging Cancer, that otherwiſe probably would have laid dormant for many Years. Therefore 'tis my Advice always to be very cautious in your Proceedings in ſuch dubious Caſes: For as the learned *Heurnius* obſerves, in his Comment upon *Aph.* 38. *Lib.* 6. there is a double Poiſon in theſe ſort of Tumours, (that is, ſuch as partake of a cancerous Nature) the one putre-

putrefactive, and the other corroſive; ſo that if you apply hot and moiſt Medicines to maturate the ſame, you increaſe the Putrefaction; whereas, on the other Side, if you adhibit thereto corroſive or ſharp Applications, you equally aſſiſt the other Poiſon, and increaſe the Malady. So that turn which Way you will, you are attack'd on either Hand; and for that Reaſon 'tis always the beſt and ſafeſt Courſe, wholly to avoid theſe ſuppurative Remedies, where any Thing of that Nature is ſuſpected.

The other Cautions requiſite to be obſerv'd in this Work, are few, and of ſmall Moment. The principal are theſe: Firſt, when a Tumour is ſeated upon ſome membranous or tendinous Parts, as in the Articulations or Joints, Suppuration ought not raſhly to be attempted, leſt a Loſs of voluntary Motion, or a Deſtruction of the Joint, enſues; for we frequently ſee that Ulcers ariſing from ripen'd Abſceſſes in thoſe Parts, are commonly very tedious and long in Cure; the Ligaments, Tendons, and even the Heads of the Bones themſelves, ſuffering by the Air, and Sanies of the Ulcer diſtilling thereon. Secondly, where the Matter cannot have a free Diſcharge, as in internal Abſceſſes, where the greateſt Circumſpection is requir'd: For hence Empyema's, hectick and putrid Fevers, with all their Train of Accidents, have their Source and Origin. Thirdly, when a Tumour occupies, or hath its Seat near unto, or upon ſome large Veſſel, (eſpecially the arterial) this Intention is not void of Danger; for by the Acrimony of the purulent Matter, the

Tunics

Tunics of the Veſſel may be corroded, as well as the circumjacent Fleſh; whence an Hemorrhage and Death may be the Conſequence. Laſtly, in large and great Tumours, of long Duration, that won't yield to any of the foregoing Intentions, but increaſe in Magnitude, whence though a Suſpicion of Suppuration may ariſe, (taken likewiſe from ſome of the preſent Symptoms) we ought not raſhly to attempt the Suppuration, for fear of ſome fatal Conſequence: Which had like to have been the Caſe of a moſt prudent and circumſpect Practitioner, who had undertaken to open a Tumour of this Sort; but upon a more mature Deliberation (judging it to be an Aneuriſma) refus'd to do it, and thereby ſav'd both the Patient's Life, and his own Credit; that otherwiſe muſt have ſuffer'd from the Raſhneſs of the Undertaking. If then *Fallopius* (who was a perfect Maſter in this Art) had through Inadvertency like to have ſullied his Reputation by the Death of his Patient, which in this Caſe had been almoſt unavoidable; how highly doth it behove a young Surgeon to be well appriz'd of the Nature and Condition of the Tumour, before he goes about the ripening and opening it? Leſt, inſtead of well concocted Matter, (which he hopes to meet with from his hot and moiſt Applications) a Torrent of Blood ſhould preſent it ſelf, to his great Surprize, that in ſpite of all Endeavours to ſuppreſs it, for the moſt part terminates in the Death of the Patient, as too frequently hath been experimented by thoſe who have raſhly ventur'd to ſuppurate this Kind of Tumours, which by the Rarefaction

of the contain'd Fluids (by means of the aforeſaid Dreſſings) have augmented the Swelling to ſuch a Degree of Magnitude, that the muſculous Fleſh and Skin being no longer able to hold together, the arterial Blood hath at laſt beat its Way thro' the involving Teguments with ſuch a Vehemency that the poor Sufferer hath in few Moments after expir'd.

CHAP. V.

Of Anodyne Medicines.

AMongſt the great Variety of Symptoms to be met with in the different Stages of Tumours, there is none more common, more violent, and of worſe Conſequence, (if not timely remov'd) than that moleſting Senſation, Pain; an Accident inſeparable, not only from Tumours, Wounds, Ulcers, Fractures, and the like Maladies ariſing from external Injuries, but alſo in thoſe proceeding from an internal Cauſe, of what Sort and Denomination ſoever.

In all which, it manifeſts it ſelf ſo early, and even (as one may ſay) in the very Dawn of the Diſtemper, while the firſt Rudiments of it are ſcarce form'd, that 'tis ſomewhat difficult to define whether the ſame be a true primary Affect, or only a Symptom of it: Inſomuch that no ſmall Controverſy has aroſe amongſt Phyſicians, whether this dolorous Senſation exiſts *in fieri vel facto*,

to, or (which is all one) whether it depends on the *ſolutio continui*, or on the *ſoluto continuo*. *Heurnius* pleads ſtrenuouſly in Defence of the former, confirming his Aſſertion from the Authority of the Ancients. The learned *Valleſius* in his Refutation of *Argenterius*, and others upon this Subject, does likewiſe prove by many nervous Arguments, that this αἴσθησις ἀνιαρὰ, *vel ſenſus Triſtis*, as *Galen* is pleas'd to define it, is a true and proper Paſſion; as appears from this Text of the ſaid Author: *Paſſio (inquit ille) quæ præter naturam, violenter, & affatim, ac repente, in nobis fit, dolorem facit, &c.* Now it is manifeſt that the *affatim ac repente* is ſpoken of the Cauſe, and not of the Symptom; to which Opinion *Fallopius* tacitly gives his Aſſent, ſaying, " I ſhall not trou-
" ble my ſelf whether Pain be a moleſting Sen-
" ſation it ſelf, or only a Symptom of it: For
" let it be whether it will, the Curation is always
" indicated the ſame.

" Every Function of the Senſes (ſaith he) which
" by *Gal.* 1. *De Simpl.* and in a hundred other
" Places, in Imitation of *Plato* are called Paſſions,
" are always *in fieri:* And theſe Paſſions have
" always an efficient Cauſe, which being taken
" away, the Paſſion ceaſeth.

Now it appears from the ſaid *Plato* in *Timæus*, that the Word *Pathos* denotes or ſignifies a Thing in Motion; and in the ſame Senſe it is taken by Phyſicians. For (ſay they) a Paſſion is in Motion, but the Affect is permanent; that fluxile, moveable, imperfect, and as it were the Way to the Af-

fect; but this is fix'd, ſtable, perfect, and the End thereof.

As Pain therefore is the Primordium of moſt Diſeaſes, and gives the firſt Warning to the common Senſory of the Approach thereof; it is evident that this painful Senſation is a Paſſion or Accident, and that while the Diſeaſe is *in fieri*, and not *in facto*; and in ſome Caſes it may be looked upon as a proper Affect it ſelf, notwithſtanding what may be objected to the contrary: For I know that *Scherbius*, *Hoffman*, and ſome other learned Men, are of a quite different Opinion, affirming, that Pain is no other than a common Symptom, depending, like the reſt, upon the primary Affect. The learned Profeſſor *Waldſchmidt*, concludes in Favour of theſe latter, ſaying, that as Pain immediately follows a *ſolutio continui*, it is a Symptom, and not a Diſeaſe.

To reconcile theſe different Sentiments, we do agree in the Truth of *Waldſchmidt*'s Poſition, that where a *ſolutio continui* is made by Tumours, Ulcers, Contuſions, Fractures, or any the like Affects, owing to ſome external Accident or Violence offer'd to the Parts, whereby the Series or natural Order of the Fibres may be injur'd in their Site and Office; Pain ſucceeding thereupon is then properly a Symptom: For the external Injury gave Being to the Diſtemper wherefrom it aſſumed a proper Denomination, and Pain is only the Conſequence of it.

The like may be ſaid where an Intemperies affects the Part, and produces Pain, as in diſtem-

per'd

per'd Ulcers; the acrimonious Serum, which at firſt gave Birth to the Ulceration, may be accounted the efficient Cauſe, and Pain the Product of it; (the *ſolutio continui*, or Loſs of Subſtance, being the Affect it ſelf.) But *è contra*, where no other pathognomonick Symptom appears, (ſave Pain) it is then a primary Diſeaſe, or proper Paſſion; as for inſtance, in all erratick and vagous Dolors, ariſing from a Plethora or obſtructed Perſpiration, and ſeveral other anonymous Diſtempers, to which Phyſicians have affixed no proper Names to diſtinguiſh them by, in which Pain alone is the ſole and predominant Symptom; it is there a proper Diſeaſe it ſelf. Hence came the Appellation of *Cardialgia*, *Cephalalgia*, and ſuch like Terms, to be attributed to Pains of thoſe Parts, from which they borrow their compound Titles; and in theſe Caſes this *ſenſus triſtis* is always accounted an idiopathick or proper Affect; the efficient Cauſe being taken away by evacuating the conjunct Matter, the Effect (that is, Pain) ceaſeth; as might plainly be demonſtrated by almoſt innumerable Examples.

But in Fevers and other acute Diſtempers, wherein ariſeth a Complication of Symptoms to form the Diſeaſe, and this Senſation, Pain, is only a Prodromus or Forerunner of them, the Diſeaſe being then *in fieri*; it then, from the Authority of *Galen*, may (in like manner) be reckon'd an antecedent Accident, that uſhers in the Malady at Hand; which after the ſame is confirmed, and if the Dolor ſhould ſtill remain, as commonly it doth during the whole Courſe of the

Diſtemper, (more or leſs) it is then no more a Paſſion, but only a Symptom of the preſent Malady.

The Cauſes of Pain may partly be collected from what has been ſaid, which as they are various and manifold, the curative Indications are to be taken accordingly; whence came ſo great a Variety of Medicines to be introduc'd into this Claſs, comprehending not only very many of the emollient, diſcutient, and narcotick Ingredients, but alſo ſeveral others, that ſeem to have no Affinity therewith, but rather repugnant to the main Intention: Such as the actual and potential Cautery, that by burning and ſhrinking up the affected Nerve takes away the Perception or Senſe of the Organ, and conſequently the Pain along with it, (an Experiment very common in ſeveral Caſes;) on which Account theſe and the like Remedies contributing any Thing to this Deſign, may not improperly be rank'd under this Diviſion, having as lawful a Challenge to the Intention, as thoſe more properly call'd Anodynes: Yet as a great many of theſe fall under the Phyſician's Province, eſpecially in internal Diſorders, wherewith we have nothing to do at preſent; I ſhall paſs over all the remote Cauſes relating thereto, and take Notice only of the moſt evident, which ſome Practitioners have compriz'd under two general Heads, that is, a Solution of Continuity, and an Intemperies in the Part affected.

The firſt, if we take it in *Hippocrates*'s Terms, *Lib.* 3. *De articulis, that every Diſeaſe is an Ulcer*, is very extenſive, and would oblige us to run over the

the Cauſes of all internal Diſorders; for it is certain, that whatſoever will diſtract the Order of the nervous Fibres, whether by Divulſion, Laceration, Contortion, Diſtention, or any other Means that may force them from their Contiguity or natural Tenor, will produce Pain more or leſs, proportionate to the Degree of the Impreſſion made thereon: According to the true Remark of *Boerhaave*, who acquaints us, that the Pain is more or leſs acute, in proportion to the preternatural Diſtention of the Fibre. "For, ſaith he, "the nearer it is breaking, the ſharper is the "Pain; and the more remote it is from that un-"natural State, the more remiſs and ſlighter the "dolorous Senſation is." The Truth of which is manifeſt from the different State of a Phlegmon, which at its firſt Beginning, while the Obſtruction is recent, and the Diſtention of the Solids ſmall in proportion, the Pain in like manner is very tolerable: But as the Tumour increaſeth in Magnitude, and the conſtituent Fibres of the Veſſel (and thoſe likewiſe of the adjacent Parts) are put upon the full Stretch thereby, the Pain keeps equal Pace or Footing with the Diſtention, growing daily more and more exorbitant; till at laſt (as in ripen'd Apoſtems) the Matter breaking through the containing Teguments, and having open'd a Paſſage for its Diſcharge, the eroded and broken Fibres thereupon retract toward their Origin, and the Pain forthwith ceaſeth. The like may be ſaid of Contuſions, Fractures, Diſlocations, Wounds, *&c.* for as ſoon as the miſplac'd Fibres are reinſtated in their natural Poſi-

tion, from which they had been violently torn by Force of the outward Accidents, the Pain (however vehement before) now preſently remits, and gradually diminiſhes, as thoſe capillary Filaments recover their natural Tone and Order; and even in Punctures, though made with the fineſt and ſmalleſt Inſtrument, an acute and grievous Pain will oft ariſe, by ſlightly wounding theſe ſenſible Bodies; for the Cure whereof, 'tis neceſſary ſometimes wholly to divide the Faſciculus of Fibres, or otherwiſe to convert them into Pus, in order to deſtroy their Connexion: For, as *Ambr. Paræy* obſerves, while ſome Portion of this nervous Bundle is only cut aſunder, or half divided, the ſeparated Parts on the one Hand retracting toward their Original, and the coherent on the other being put upon an Over-ſtretch, will neceſſarily occaſion a continual Tearing, and from thence great Pain, and ſometimes Convulſion, until the *ſolutio continui* of the whole be effected; for which End, the Medicines are generally applied very hot, according to that grave Surgeon's Advice, with a Deſign of cauterizing thoſe perceptible Parts, and therewith removing the Senſe of Pain acting thereby the Part of a true Anodyne.

The other general Cauſe of Pain, (called an Intemperies) is deriv'd from the four elementary Qualities of the Antients; whereof two may be ſaid to be active, and two paſſive; as appears from *Gal. De Sympt. Cauſ. cap.* 6. ſaying, *Quippe humidum & ſiccum, ſi abſint calefactio & refrigeratio, citra violentiam corpus attingunt*; which is as much as to ſay, that a humid and dry Cauſe, or Intem-

Intemperies, cannot produce Pain, except there be Heat or Coldneſs conjoin'd. And of the ſame Opinion is *Paulus*, who poſitively affirms that no Humour cauſeth Pain except it partake of Heat or Coldneſs; whereto both Reaſon and Experience ſeem to join Iſſue: For when by Heat the Humours are put into a preternatural accelerated Motion, and thereby flow faſter in upon the evaneſcent Arteries than can be receiv'd by the capillary Veins, an Obſtruction muſt certainly ariſe therein, and from the Obſtruction a Diſtention of the Fibres; whence Pain, Inflammation, *&c.* and on the other Hand, when by Coldneſs the Diameters of the ſmall Veſſels are ſo much compreſſed and ſtraitened as not to admit a quick and free Paſſage for the Blood to paſs through 'em, the like Accident will poſſibly enſue, together with the rehears'd Symptoms; whereto may be referred the Dyſcraſy of the Humours themſelves, when they offend in this latter Quality, and are clogg'd with a viſcid and ſlimy Lentor; are apt to obſtruct in the minute Paſſages, and cauſe Pain particularly in thoſe Parts where the natural Heat is moſt faint and languid.

But of theſe two Exceſſes of Qualities, the former is the more frequent and excruciating; for it affects moſt, if not all Diſtempers whatever; It attends Tumours, Wounds, and Ulcers; accompanies Fractures, Diſlocations, Contuſions, and, in general, all external, if not internal Accidents producing any Diſorder in the Solids or Fluids; for no ſooner is the Æquilibrium deſtroyed betwixt the containing and the contained Parts,

ſo

ſo that the Fluids are not duly propell'd through their proper Tubuli, but are ſuffer'd to reſt and neſtle in the Receſſes of the capillary Extremities, (whereby the Fibres may be irritated and diſtended by the Impulſe of the fervid arterial Blood driven in upon them) than Pain and an inflammatory Heat (which we call a hot Intemperies of the Part) immediately begins to appear: And theſe are ſo common Attendants of each other, that it is ſomewhat difficult to ſeparate or define the Cauſe from the Effect, eſpecially in Tumours, where the Obſtruction produceth the Diſtention, from whence ariſeth the Pain and Inflammation; which latter ſeems rather to be the Effect, than the Cauſe of the former, unleſs we will poſtpone the Cauſe to the Effect, which is not allowable.

But in Ulcers attended with this Intemperies, the Caſe is the reverſe and different; for there an acrid or bilious Humour may produce an Intemperies in the Part, which by its Acrimony vellicating the Fibres, may excite Pain, and from the Pain Fluxion; and therefrom conſequently a greater Heat: So that Pain and Heat may be ſaid to be reciprocal Cauſes to one another, exaſperating each other, depending in the main upon the *ſolutio continui*, the primary Cauſe of both: For there can be no conſiderable Diſtention of the Fibres, ſo as to form theſe Symptoms; but there muſt neceſſarily at the ſame Time be a Rupture of ſome of the minuteſt Threads or Filaments, into whoſe Interſtices the contain'd Humours ſlipping, and there putrifying, will certainly occaſion a greater Heat and Pain.

And

And this Procedure is doubtleſs effected during the whole Augment of inflammatory Tumours, the Fibres breaking one after another, either by the Violence of the Extenſion, or Corroſiveneſs of the acrid Serum; till at laſt the extravaſated Juices acting the ſame Part upon the cutaneous Fibres, force their own way to the Surface of the Skin in a manifeſt Rupture or Solution of Continuity; during which Interval, theſe two Symptoms have been very predominant, and even inſufferable; a plain Demonſtration, that the *Solutio continui* was made at or about the Time the Pain and Inflammation firſt appeared; and altho' the ſame was not viſible to the Eyes, yet 'tis apparent enough to Reaſon; inſomuch that ſome Phyſicians of good Note, have confined all the efficient Cauſes of Pain to a Solution of Continuity; dividing it into two Orders, the one evident, the other rational: The evident, ariſes from Inciſion, Fracture, Tenſion, Eroſion, and the like Accidents afore obſerved; the rational, or that only found out by Reaſon, is what they call an Intemperies, whereof we have been treating; whence I ſhall conclude in the Words of a moſt judicious and learned Author, that there is one only proxime Cauſe of Pain, that is, a *Solutio continui*; "For (ſaith he) there cannot be more "proxime Cauſes of one Thing, in the ſame Se-"ries of Cauſes," that is in thoſe, which in a Series of efficient Cauſes ſucceed in a right Order; ſo that at laſt, it comes to the ultime or final of all, and this is a *Solutio continui*, from whence Pain: And ſeeing the Contiguity of the Parts

cannot

cannot be ſeparated from one another without Violence, there muſt neceſſarily ariſe an Intemperies, or preternatural Diſpoſition in the Part affected, according to the preſent State of the Humours, diſpoſing it to a hot, dry, cold, or humid Temperament; even as this or that Quality hath the Predominancy in the Subject, as very plainly appears from the different Conſtitutions of human Bodies: For we ſee, that the hot and dry Temperaments are ſubject to the inflammatory Tumours and Ulcers of a like Diſpoſition, attended very often with an Eryſipelas and other bilious Eruptions, demonſtrating the hot and fiery Craſis of the Fluids: Whereas on the other hand, thoſe of a cold or humid Nature, ſuch as the phlegmatick and hydropical Habits of Body, are commonly moleſted with an Intemperies of the like kind.

The œdematous cold Swellings, and the crude indigeſted Lips of Ulcers proceeding therefrom, prove the Aſſertion of the former; as doth the watry Gleet continually ouzing from hydropical Exulcerations confirm the latter.

To remedy which, he muſt firſt take away the efficient Cauſe, by correcting and altering the Diſtemperature of the Fluids, and reſtoring them to their primitive and natural Craſis, and then proceeding to the Removal of the conjunct Cauſe, by means of proper local Applications endued with a contrary Quality, the ancient Apothegm of *Hippocrates*, *contraria contrariorum eſſe remedio*, holding good here.

I ſhall

I ſhall now proceed to the Remedies adapted for appeaſing and removing this anxious Symptom, Pain, of which we have an ample Catalogue left by Phyſicians; and *Galen*, one of the moſt principal, hath in *Lib.* 5. *De Simpl.* included them under three Heads, ſaying, there are ſome Medicines that take away the Cauſe of Pain, and conſequently the Pain itſelf; 2*dly*, others, that neither take away the Cauſe, nor damage the Subject; and *laſtly*, ſome that aboliſh and take away the Senſe of the Organ or Part itſelf, by ſtupifying it.

The firſt Method, as it is doubtleſs the beſt and moſt deſirable, ought by all means to be aim'd at, which may ſometimes be effected, by evacuating the offending Humour that cauſed the Pain, and induced the Intemperies: Thus very often an Eryſipelas is cured by proper Diſcharges, the efficient Cauſe being thereby drain'd off, the proxime or adjunct will neceſſarily ceaſe in courſe, if aſſiſted by the Application of ſome warm lenient Remedy, that may breath out the ſubtil bilious Humour.

The like may be ſaid of very many other Diſtempers, whoſe Cure chiefly conſiſts in removing the Cauſe, the Effect vaniſhing of courſe. But where the Pain is more permanent and fixed, reſiſting the aforeſaid Means, then are we to have recourſe to ſuch Remedies as may render this troubleſome Senſation more tolerable and eaſy to be endured, without hurting the Subject: Of which ſort are all the mollifying and relaxing Claſs of Medicines, that by their lenifying and demul-

cing

cing Faculty, may ſupple and relax the Rigidity and Hardneſs of the Fibres, abate the Tenſion, and conſequently the Pain thereon depending; ſuch are the Fat of domeſtick Fowls, and ſeveral Quadrupeds, as that of Hens, Ducks, Geeſe; Hogs, Calves, and Deers Suet: Including likewiſe many vegetable Simples endued with an emollient and diſcutient Faculty; the moſt common are, the Flowers of Camomile, Melilot, Elder, Saffron, Leaves of Mallows, Marſhmallows, Pellitory, Camphor, *&c.* whereto we may add, white Bread, new Milk, warm Water, Pidgeon's Blood, Yolks of Eggs, and ſundry others of a like Nature and Quality, that may be pick'd up for this Uſe; together with ſeveral of the officinal Compounds: Amongſt the great variety of which, the *Ol. Amyg. dulc. Lini, Cham. Exceſtrenſ. Vulpin. Lumbric. Roſat. Sambucin. è Vitell. Ovor. Ung. Dialth. Martiat. Cerat. Galen. Empl. Crocat. ex Galb. de minio nigr. & fuſc.* and the noted camphorated Spirit, ſeem the moſt adequate for this Deſign, which is chiefly to unbend the nervous Fibres, and abate their Stiffneſs, whereby they may become leſs ſenſible of the impulſive Motion made by the Fluids. For as *Galen* in his Comment upon *Aph.* 21. *Sect.* 7. has defined it, the Pulſation in inflamed Members, is a Motion of the Arteries inducing a painful Senſation to the Patient, ariſing from the ſtraitneſs of the Paſſages compreſſed by the Tumour; for while we are in health, we perceive no ſuch dolorous Senſation in the Arteries when they make their Syſtole and Diaſtole, becauſe the Fluids are moved in a laxer and ampler Paſſage

and therefore are not ſo capable of making that Impreſſion, when they ſtrike upon the ſenſitive Organs, as they do, when the ſaid Parts are inflamed, which then are very ſtiff and tenſe, and thereby capable of receiving the greater Injury. For all Bodies whatever, (and eſpecially the nervous, which are moſt capable of this Paſſion, Pain) the more they reſiſt the Shock, the greater Damage they incur; as is evident by many familiar Examples which prove, that an impulſive Motion is ſooner waſted upon a ſoft and pliable Body, than upon one that is ſtiff and rebounding: And for that Reaſon mollifying Medicaments, come in amongſt the anodyne or pain-eaſing Remedies. And farther, as they conſiſt of warm ſubtil Parts, they not only relax the Fibres, and abate (if not wholly take away) the Tenſion, but very often likewiſe ſet open the Pores (if adhibited in a convenient Form) for the fervid Vapours to paſs off by, and therewith remove both the proxime Cauſe of the Diſeaſe, *i. e.* the Obſtruction, and Pain the Effect. This *Hippocrates* hath very plainly made appear in *Aphor.* 22. *Lib.* 5. ſaying, *Calidum cutem emollit, extenuat, dolorem ſedat, rigores, convulſiones & diſtentiones mitigat, & ex iis quæ ad caput attinent, ejus ſolvit gravitatem; plurimum autem confert oſſium fracturis, ſed nudis præcipue, eorumque maxime qui in capite & quæcunque à frigore moriuntur, vel ulcerantur; & herpetibus exedentibus, ſedi, pudendo, utero, veſicæ, his omnibus calidum amicum*; which *Galen* in his Expoſition upon this Aphoriſm, further enlarging, ſaith, that by the Uſe of moderate warm

warm Things, we mollify Indurations, extenuate groſs Humours, appeaſe Pain, and alſo mitigate Convulſions and Diſtentions; not ſo Coldneſs, which (in ſome Caſes) endueth inſupportable Pains, by reaſon it is heterogeneous or foreign to our Nature (*i. e.* the natural Heat) but Heat cauſes all the ſaid Benefits, concocting ſome and altering them for the better; and laſtly, by evacuating and diſcuſſing the noxious Contents, induceth Health, or (if it do not take away the whole Cauſe, and perfectly cure, yet) at leaſt mitigates the Dolour. And therefore by way of Concluſion, he paſſeth the definitive Sentence, *quod calidum eſt amicum; frigidum verò inimicum:* For Heat reſolves the ſizy Juices, looſens their cloſe Contexture, and rarefies the ſame into a vaporous exhalable Subſtance, whereby the Compreſſion of the Solids being taken off, and the obſtructed Pores reſerated, the painful Corrugations and Contractions of the Fibres and nervous Parts, muſt neceſſarily vaniſh with the Cauſe of the Diſeaſe. But Cold acting contrariwiſe, is reckon'd inimical to this Intention; and therefore unleſs it be to repreſs the Vehemency of a Fluxion, (as in the Increaſe of inflammatory Tumours,) can be of no Service here. In which Caſe the lenient Repellents are of moſt Efficacy; ſuch as the *Ol. Roſ. Oxyrrhodin.* &c. are moſt excellent Medicines for both Intentions. The Oil, by its relaxing Faculty, is adapted to abate and take off the Tenſion; and the Vinegar, by its Coldneſs, is very ſuitably adhibited to repel the Impetus of the Humours, and likewiſe by virtue

virtue of its inciding and penetrating Quality, to attenuate the extravaſated Matter, and reſolve the obſtructed Contents of the Capillaries; fitting thereby the one for inſenſible Tranſpiration, and the other for its due circulatory Motion, whereto, if a Portion of Camphor be added, 'twill become no leſs effectual; its excellent diſcuſſive Quality contributing very much to this Deſign.

But if notwithſtanding theſe Endeavours the Pain ſtill continues exorbitant and unſubdu'd, we muſt then (when milder Remedies will not do) have recourſe even to the narcotick Claſs, to ſtupify the Senſe of the Part, leſt otherwiſe the Patient's Strength be worn out and overcome by the inſupportable Dolor; whence Fevers, Spaſms, Phrenzies, continual Watchings, and the like Train of grievous Accidents, do oft enſue: To obviate which Maladies, all the narcotick and anodyne Medicines are call'd in, whether ſimple or compound. The moſt noted of both Kinds, are the Leaves of Henbane, Hemlock, Deadly Night Shade, Black Poppy, and its fam'd inſpiſſated Juice call'd Opium, together with thoſe uſeful Compoſitions prepar'd from it; ſuch as the Unguentum Populneum, Liquid Laudanum, and ſundry others, to be met with in the Second Part of this Work; whoſe Efficacy conſiſting in a narcotick Sulphur, conjoin'd with a refrigerating Faculty, hath Power to damp the Motion of the Fluids, cool their Effervеſcencies, repreſs the Orgaſm of the Spirits, and obtund the Senſe of the Part; rendering it leſs perceptible of the Impulſe

of the Humours, and Stimulus of the Fibres thereon depending: For which Services, the recited Simples, with their Compounds, deſerve a Place in this Intention, being ſometimes very neceſſary and beneficial (when diſcreetly manag'd) even in the greateſt Emergencies.

But as their refrigerating and ſtupifying Faculty hath ſometimes been found prejudicial, when too liberally made uſe of, the Ancients wiſely order'd ſome warm attenuating Medicament to be mix'd therewith, in order to withſtand and prevent any future Miſchief that might ariſe from their cooling narcotick Nature: For in great Inflammations, where the Pain is moſt vehement and their Uſe is moſt requir'd, the greateſt Circumſpection is requir'd; ſuch Caſes as theſe being very prone of themſelves to terminate in a Gangrene, and more eſpecially when aſſiſted that Way by an intenſe Degree of Coldneſs and Stupefaction, hindering the free Acceſs of Spirits to the Parts, and extinguiſhing not only the preternatural and extraneous Heat therein, but alſo the ingenite and natural: So true is the Saying of the learned *Fuchſius*, that when we apply a Medicine too ſtrong for the Diſeaſe and Nature of the Part affected, we bring on a new Diſtemper contrary in Quality to the former; ſuch as Gangrene, Schirrous, *&c.* To prevent which Accidents, the Ancients took that wiſe Precaution of moderating their Exceſs of Cold with Caſtor, Saffron, Myrrh, and the like warm Ingredients, added to their opiate and narcotick Compoſitions; and we inſtead thereof do ſubſtitute the Camphor, as more effectual on all

Accounts. For as Mr. *Marten* obſerves, it opens, penetrates, digeſts, and promotes inſenſible Tranſpiration, and upon the Account of its fine ſubtil Particles, mix'd with proper Medicines, removes the moſt intenſe, vehement, and grievous Dolors: Concluding, that the Efficacy of Opium is wonderfully improv'd and advanced by the Addition of that moſt excellent Drug whoſe volatile, minute, thin Parts, gain it a ſpeedy Admiſſion through the obſtructed Pores, into the inmoſt Receſſes of the Parts; where it attenuates and ſubtilizes the groſs Humours, obtunds the acrid and ſharp, and, laſtly, ſets open the Paſſages for their Expulſion; whilſt the Opium in the Interim compoſes the enrag'd Spirits, fetters their Activity, relaxes the hard tenſe Fibres, and renders them leſs perceptible of the ingrateful Stimulus and Impulſe of the fervid Humours; whereupon an Indolence or Remiſſion of that dolorous Senſation will neceſſarily follow, without incurring the Danger of rarifying the viſcid and groſs Humours, and not preparing the Way for their Eſcape; whereby, inſtead of appeaſing the Pain, is excited a flatulent Vapour, that by diſtending and tearing the involving Membranes, would prove more troubleſome and inſupportable than before. For which Cauſe, the learned *Heurnius* put in a Caveat againſt the Adminiſtration of Opiates where the Humours are groſs and viſcid: Neither can theſe ſtupifying or Pain-eaſing Remedies, into which the Opium enters as an Ingredient, be ſafely applied to the Ear for eaſing the Pains it is ſubject to, leſt Deafneſs and worſe Accidents a-

riſe, of which *Galen* makes mention *Lib.* 3. *De Comp. Med. Sec. Loc.* relating the Hiſtory of a Perſon who by the Uſe of Opium, in the ſaid Caſe, loſt both his Voice and Senſe; ſo that afterward he could not be recover'd by Art. The ſame Caution holds good in all Places bordering upon the Confines of the Brain, wherewith there is an immediate Sympathy and Communication: But in all other Parts, remote from that noble and principal Organ, the Narcoticks under the ſaid Limitation may commodiouſly be applied, which for a Summary I ſhall briefly rehearſe after this Manner: Firſt, Where the Pain ariſeth from Tenſion or Hardneſs of the over-hauled Fibres, emollient and relaxing Applications, as they ſoften the Hardneſs, and ſupple the rigid Parts, come thereby under the Denomination of Anodynes. Secondly, When the Dolor proceeds from a cold Cauſe compreſſing and obſtructing the Pores, diſcutient Remedies, by their Warmth, reſuſcitate the natural Heat, and enable it to throw off the oppreſſive Matter; from whence the dolorifick Diſpoſition firſt aroſe. Thirdly, In a dry Intemperies, humecting Remedies, according to the Decree of *Hippocrates*, are the ſole Remedy. And, laſtly, in a humid Dyſcraſy, the contrary. And this being all that is neceſſary to be underſtood upon this Subject, in relation to topical Applications, I ſhall proceed to the laſt Intention of Tumours, which is that of opening the ripen'd Abſceſs.

CHAP.

CHAP. VI.

Of opening an Abſceſs.

THE Tumour being now brought to its full State and Maturity, an Indication ariſeth of evacuating the contain'd Matter, leſt by its longer Detention it ſhould deſtroy and conſume the neighbouring Parts more than is meet; whence fiſtulous and ſinuous Ulcers, Carioſity of the Bones, and ſeveral other Accidents, might ariſe, to the great Trouble and Damage of the Patient; for while the Pus is contain'd in the Part, it ſtill corrodes more or leſs, according to the Virulency or malign Quality of the Humour, and thereby keeps the Patient uneaſy to no Purpoſe; upon which Account an immediate Diſcharge of the noxious Contents is requir'd as ſoon as the following Tokens are apparent; which *Avicenna* hath very pertinently deliver'd to this Effect. "When "thou perceiveſt (ſaith he) a certain Softneſs in "the Part affected, with an Abatement of the "Pain, and a Remiſſion of the inflammatory "Heat, and that one Part of the Tumour ap-"pears prominent above the reſt, and is contrac-"ted into a Cone or Point, and ſhall likewiſe "perceive a Fluctuation of Matter when the "Tumour is preſs'd with the Fingers; and that "the Colour of the Eminency or Point is now "grown white, then thou may'ſt certainly be-"lieve that the Tumour is become an Abſceſs,

" or, which is all one, the contain'd Matter is " duly ſuppurated, and fit for its Diſcharge, ei- " ther by the Knife or Cauſtick." From whence ſprung theſe common Verſes;

Durities longa, Pulſus, Dolor, & Calor aucti,
Signant Pus fieri: Sed factum dicta remiſſa,
Sub Digitis undans, albeſcens pars & acuta.

The Reaſon of the Remiſſion of the Symptoms in this State, ſeems in a great meaſure owing to the Diſſipation of the volatile, ſaline, and acrimonious Vapours, elevated from the putrifying extravaſated Humours, (during the Time of Suppuration) which continually diſtending and tearing aſunder the ſuper-incumbent Fibres, muſt neceſſarily excite great Pain, Tenſion, and Inflammation, all the while the nervous Fibrillæ were put upon the utmoſt Stretch; which at laſt breaking and giving way one after another, the concocted Humour is then admitted even to the Surface of the Cutis; whereupon a great Portion of the corroſive and fretting Vapours flying off, the Reſidue becomes more mild and tractable; which together with the Breach made in the Part, the nervous Fibres withdrawing themſelves toward their Origin, and being now free from the violent Extenſion, a Ceſſation of the Pain, Tenſion, &c. muſt neceſſarily ſucceed: And ſeeing that the Matter hath forced its Way through all the involving Teguments, to the very utmoſt of all, the Part will feel ſoft, and look white, by reaſon of the Thinneſs of the interpoſing Membrane, where-

through

through the whitiſh Pus or Matter may be perceiv'd; as in like manner the Fluctuation of it, when preſs'd with the Fingers, (being even now ready to make its own Egreſs or Diſcharge) eſpecially in ſimple inflammatory Tumours, that ſuppurate the ſooneſt, and afford the beſt Pus: For if the Matter exciting an Abſceſs, be of a groſſer Nature, the active Principles of the Humours being inviſcated with a clammy Lentor, cannot exert themſelves ſo powerfully in tranſmuting the ſluggiſh Juices into a laudable concocted Matter, (the ſole Effect of Heat, that generally in theſe Caſes is too much wanting;) and therefore it cannot be expected that pituitous cold Tumours, which uſually lie deep, ſhould exhibit all the recited Symptoms of Suppuration: As is well expreſs'd by *Hippocrates* in *Aphor.* 41. *Sect.* 6. ſaying, *Quibus Suppuratum aliquod in corpore exiſtit, neque de ſe ſignificationem edit, iis ob Puris aut Loci craſſitudinem ſui indicium non exhibet.* Which Kind of Suppuration, as it proceeds ſlowly and obſcurely, is much to be ſuſpected, eſpecially where the internal Viſcera are concern'd; for very frequently the Abſceſſes or Apoſtemations of thoſe Parts go on ſo very tacitly and imperceptibly, as ſcarce to give any Warning of the approaching Danger, until a Rupture thereof manifeſts the ſame, to the great Peril of the Sick, and even thoſe affecting the external Parts, (whereto topical Applications may more commodiouſly be adhibited) are not quite void of Danger; as the Pituita, or groſs Matter, uſually lying deep amongſt the Tendons and Membranes, from which probably it deriv'd

its primary Exiſtence, hardly ever admits of a perfect Maturation or Concoction, though attempted by the moſt efficacious Remedies the *Materia Medica* can afford us for that Uſe. In ſuch Caſes, therefore, a perfect ripening of the Contents is not to be waited for, leſt by the preternatural Ferment rouz'd up by the hot and moiſt Medicines, the Humours ſhould degenerate into a corroſive Nature, and occaſion a phagedenick or cancerous Ulcer; or granting the Virulency or malign Quality does not quite come up to that Pitch, yet a Corruption and Putrefaction of the Nerves, Tendons, Ligaments, and even the Bones themſelves, (as in ſchrophulous and venereal Caſes) may at the beſt be expected: For which Cauſe, 'tis uſual to anticipate the Maturation of ſuch kind of Tumours, by opening them in due Time; according to the Advice of *Hippocrates*, *Lib. De Fiſtul.* who commands that all Swellings ariſing from a venenate or malign Matter, or if ſeated near to, or upon a Joint, or near the *Inteſtinum Rectum*, *&c.* ſhall ſpeedily be open'd, in order to avoid the ill Conſequences of the too long Detention and Impriſonment of the Humour, whereby the adjacent Parts might be corroded and putrefied, and the Abſceſs terminate in a ſinuous Ulcer; as *Hollerius* hath well expreſs'd it in the following Manner: *Quæ ſuppuratio (inquit) ſponte ſua non rumpitur, ferro, igne, vel medicamentis aperienda eſt: Alioqui ſerpit ſanies & cuniculos agit, venas, nervos, arterias, & vicina corpora depaſcitur: Atteruntur oſſa & cariem ducunt, idque metuendum magis in articulis, partibus*

corporis

corporis quæ in declive patent; quare etiam ſi tumor nondum ſatis maturuit, ea pericula ferro antevertunt multo magis ſi peſtifera aut virulenta materia ſit, &c. The Inſtruments appointed for this Uſe, may be reckon'd under two Heads, *viz.* the Knife, and Cautery; the firſt Sort admits of various Forms and Shapes, according to the different Caſes and Circumſtances in which it is us'd: The moſt common in Practice, is the Razor and Inciſion Knife, the ſmall and large Impoſthume Lancets with the crooked Biſtory; which are much the ſame with thoſe that were us'd of old. The σμύρνιον, and σκολόπιον, of *Paulus*, have relation to our ſtreight and crooked Biſtory, as the *Gladiolus Myrtaceus* of *Galen* has to the broad-ſhoulder'd Lancet: The ſecond and latter Kind conſiſts of the actual and potential Cautery; but as the hot Iron carries ſo much of Terror and Cruelty along with it, the potential or cauſtick Medicines do uſually ſupply its Place, as being leſs formidable to the Patient; and therefore 'tis very ſeldom or ever call'd for, unleſs where an Hemorrhage or Flux of Blood is fear'd, the whole Streſs lying upon the medicinal Kind, whoſe ſimple and mild Appearance hath wonderfully recommended its Uſe to the Timorous, who cannot think of the Inciſive Inſtruments without Averſion, though they be more expeditious, and leſs painful in Operation, than the other, and in many Caſes preferable; eſpecially where a Deformity is to be avoided. Thus in Apoſtemations of the Face, Neck, and other Places expos'd to open View, the Cauſtick leaving a rough and very

ry unſeemly Scar, it is commonly rejected, and the Knife or Lancet diſpens'd with, as likewiſe generally in other Caſes where the Tumour is ſuperficial, and the contain'd Matter ſmall in Quantity.

But on the other Hand, where the Abſceſs is large and deep, and the Contents partaking of a groſs and viſcid Nature, the Apertion in like manner muſt be ſuitable thereto, in order to avoid the Inconvenience of cramming in Doſſils, Tents, and ſuch like Dreſſings, us'd to dilate and keep aſunder the Lips of the newly divided Abſceſs; whence by plugging up the Orifice of the Ulcer, and unſeaſonably detaining its Contents, the contiguous Parts become corrupted, and render'd liable to all the recited Accidents; which M. *Belloſt*, a faithful and well-experienc'd Artiſt, obſerving, has bitterly inveigh'd againſt theſe dilatory Proceedings: And therefore in theſe Caſes, (and for theſe Reaſons) the potential Cautery, inaſmuch as it makes a laudable and ſufficient Apertion, is preferable to the former, and doubly recompenſes the Pain it cauſes: Whereto may be added the Advantage of a ſpeedier Curation than commonly attends the Biſtory; for we often ſee, that by the Time the Eſchar ſeparates or falls away from the Face of the Ulcer, the Work of Incarnation hath already begun, and ſometimes made ſuch a Progreſs, that with a very little Help afterward, the laſt Intention has been compleated, even in leſs Space than is requir'd to digeſt an Ulcer open'd after another Manner. And this I can attribute to nothing ſo much as the Thickneſs and Compactneſs

pactneſs of the Eſchar, which not only keeps in the natural Heat of the Part (the efficient Cauſe of Concoction) from evaporating, but alſo defends the ſubjacent nervous Bodies from the Annoyance of the external Air; whence the Work of Digeſtion and Incarnation muſt neceſſarily ſucceed each other. The lixivial Salts of the Medicament, by altering and abſorbing the acid Particles of the crude Humour, diſtilling from the Extremities of the broken Fibres, and eroded Capillaries, may probably contribute to this End; for the purulent Illuvies being as it were baked into a cruſtaceous Subſtance, ſhuts up the minute Orifices of the Veſſels, and therewith prevents the Effuſion of their Contents; affording by that Means an Opportunity to Nature of lodging the balſamick Particles of the Blood in the Poroſities of the ſaid Parts, where concreting and turning into a fleſhy Subſtance, (appearing at firſt in ſmall red Grains round the Bottom of the Cavity, which daily increaſing in Number and Magnitude) gradually heave up the deaden'd burnt Matter, and at laſt wholly ſeparate it from the ſound; leaving the Ulcer of a clear, florid, and lively Colour. The Method of applying the cauſtick Stone, is after this Manner: Having firſt made Choice of a ſuitable Piece of the *Lapis Infernalis*, (or what other Cauſtick you pleaſe) a Hole is to be ſnipp'd in the Middle of ſome adheſive and defenſative Plaiſter, of the ſame Magnitude of your Cautery, which muſt always be ſomewhat leſs than you deſign the Eſchar to be, by reaſon the lixivial Salts of the Medicament are apt to ſpread further upon their

their Solution, and thereby deſtroy more of the Part than is intended. This ſaid Plaiſter being ſpread upon a ſuitable piece of Cloth, is to be applied all over the Tumour, with the Perforation on the moſt eminent Part or Cone (where the Matter is moſt ſuppurated) into which Foramen you are to lay the Eſcharotick, a little moiſtened, bolſtering it up with ſmall Pledgits of dry Lint, or rather with ſmall Shreds or Snips of the ſaid Emplaiſter, laid neatly round the ſame (to keep it ſteddy and fix'd upon the Tumour;) then lay over the upper part of the Cauſtick a Pledgit of dry Lint, with another Plaiſter of the ſame ſort over all, ſecuring the Dreſſing (if need be) with a convenient retentive Bandage; then place the Member in a ſuitable Poſture during the Operation, which will be finiſhed in an Hour's time or thereabouts, more or leſs according to the Patient's Habit of Body; for ſoft and tender Conſtitutions will require ſcarce half the Time, that hard and compact Bodies will: Wherefore we uſually in this Caſe (as in all others) proportion the Strength of the Application to that of the Conſtitution. For although it may be ſaid that the *Lapis Infernalis* is a very ſafe and efficacious Medicine for this Uſe, and therefore may be adhibited indifferently to all alike; yet as it induceth ſome Pain, and even more than ſeveral Perſons are willing to diſpenſe with, we are obliged to infringe the activity of its fiery cauſtick Salts, by adding ſome proper ſaponacious Subſtance to it, whoſe ſoft oleous Particles may obtund their Vigour, and render the Stimulus more

more tolerable to the Patient. For inſtance, if we have to deal with Women or Children, whoſe Bodies are very tender and delicate, a Mixture of black Sope and Quicklime made into a Paſte forms a moſt mild and pleaſant Eſcharotick; that upon Occaſion may be ſharpned to what degree of Strength you pleaſe, by adding a due Portion of the *Liquamen cauſticum*, or a Solution of the *Lap. Infernal. per deliq.* to it. This being applied to the Part after the aforeſaid manner, cauſes little or no Pain whilſt it is in working; the preciſe Time of which cannot exactly be limited, and therefore muſt be referred to the Artiſt's Diſcretion, who by repeated Trials will learn how to vary and adapt the Strength of his Remedy to the Temperament of his Subject. Theſe milder Cauſticks ſometimes finiſhing their Operation in ſix or ſeven Hours at moſt, in puerile and feminine Habits, whereas twelve, fourteen, or fifteen will only be ſufficient for the adult; which being effected (whether by the ſtronger or weaker kind) as may be known by the Conſumption of the Medicament, and the Blackneſs of the Part whereto applied, the Eſchar is to be divided with a Razor or ſome ſharp Inſtrument quite through its middle into the Cavity of the Ulcer; and for the better diſcharge of the Humours, 'tis neceſſary to incline the Inciſion toward the depending part of the Tumour, if the Cauſtick itſelf did not lean that way (which it ought alway to do for the aforeſaid Reaſon): This done, and the Matter evacuated, a common Digeſtive prepared of Baſilicon relented in Oil of Lillies or ſome other emol-

emollient Oil is to be pour'd warm into the Inciſions, or in caſe of Pain the *Ol. Roſ. Lini*, &c. may be ſubſtituted inſtead of it, wherein a Pledgit being immerſed is to be applied over the Surface of the Eſchar, with the reſt of the Dreſſings uſual on thoſe Occaſions: Continuing this Method till the Sloughs be wholly ſeparated from the Face of the Ulcer, and it appear clean and florid.

The Antients (to whom the Compoſition and ſalutary Effects of theſe our potential Cauteries were unknown) condemned the Uſe of eſcharotick Medicaments, except in ſome particular Caſes; on Account of the many dreadful Symptoms and fatal Accidents attending their arſenical and poyſonous ſeptick Applications; and therefore having alway a conſtant and ſtedfaſt Regard to their Patients Eaſe and Welfare, did with good reaſon prefer the Steel Inſtruments for this Work, as being obnoxious to no ſuch Dangers; which *Guido*, an ancient Surgeon of good Repute, being well apprized of, has delivered his Opinion after this manner; *Tutius autem ferro quàm medicamentis cauſticis & adurentibus aperitur, quia cauſticum medicamentum majorem excitat inflammationem, pravam imprimit in parte affecta qualitatem, & interdum gangrænam efficit*, &c. And with the ſame View, that moſt accompliſh'd and judicious Artiſt *Fabrit. ab Aquapend.* counſelleth, that when Neceſſity obliges us to have recourſe to theſe cauſtick Medicines, diligently to attend the Patient during their Operation, leſt ſome unexpected Accident ſhould happen: A remakable Hiſtory of which

we

we meet with in a certain Empirick, who by applying an arſenical Cauſtick to a cancerous Ulcer raiſed all the grievous Symptoms that are wont to happen in thoſe who have taken that deſtructive Poiſon inwardly, the Patient expiring in moſt bitter Agonies, with large black Spots, Swelling, Putrefaction, and a cadaverous Stench of the whole Body: "Wherefore, ſaith he, I "would adviſe and command you always to ſhun "thoſe Medicaments, that beſides their known "Qualities have a venenate Faculty conjoined." Whereof Arſenick is one of the moſt notorious, and may well be term'd the Baſiliſk of Foſſils, killing even by Scent or Vapour. If we will believe an Author of great Credit, who tells us, that when the Mines are open'd at *Cape Bon Eſperance* (or the *Cape of Good Hope)* the Arſenick covering the Gold Ore, emits ſo malign and poiſonous Effluvia, as to deſtroy all living Creatures that come near it.

Hence as this deteſtable and helliſh Poiſon, has nothing in itſelf but an inherent Venom lodg'd in its Principles, which even the Force of Fire cannot ſeparate or diveſt it of, as is uſual in other Bodies of a deſtructive Nature; ſuch as the corroſive Sublimate, *&c.* that by a little Pains taking may be dulcify'd and render'd fit for Uſe, and of a Poiſon become a ſovereign Remedy; whereas the eſſential Principles of this Arſenick are venenate in their minuteſt Atoms, inſomuch that they penetrate deeper and continue their Effects longer than any Corroſive whatever, conſuming not only the muſculous Fleſh and ſoft Parts,

Parts, but alſo the Tendons, Ligaments, Cartilages, and even the very Bones themſelves; for which Reaſon they ought juſtly to be expunged the phyſical Catalogue, ſeeing the Danger of them is greater on one hand, than any Benefit which can be expected on the other: But in the Uſe of the modern Cauſticks the Caſe is otherwiſe, and the Precaution of the Antients doth not ſo much ſtand in force, as never any unlucky Accident aroſe from the Uſe of them to my Knowledge, being in all reſpects as ſafe as the Knife or Lancet; concerning which theſe cautionary Rules are to be obſerved in Practice. 1*ſt*, In the Apertion of Abſceſſes, the Section is to be made in the moſt prominent Part, where the Fluctuation of the contain'd Matter is moſt perceptible; for there the Skin being thinneſt, and the Senſe moſt aboliſhed, the Operation will be performed with the leaſt Pain. A Circumſtance very much to be regarded for the Good of the Patient. 2*dly*, If the Eminence of the Tumour do not favour the Diſcharge of the Humours when opened, the ſame is to be dilated, by drawing your Knife towards its depending Part, in order for the more ready and eaſy Evacuation, according to *Galen.* 13. *Meth.* 5. 3*dly*, The Rectitude of the Fibres is to be obſerved in theſe Apertions, whether of the Cutis or Muſcles. As for Example, in ſuperficial ſmall Tumours, where the Skin is only affected, and the ſubjacent Bodies unconcerned, a ſimple Section made according to the Courſe of its Fibres or Wrinkles will then ſerve the Turn. But when the

the Abſceſs is ſeated deeper amongſt the Muſcles, the Rectitude of their Fibres, altho' they do not run parallel with thoſe of the Cutis, is only to be minded; for this Rectitude of the Fibres is generally meant by Authors, of thoſe relating to the Muſcles, whoſe Order muſt duly be regarded in this Operation; leſt otherwiſe a Defect of voluntary Motion enſue in the Part whereto they ſerve, together with Pain, Inflammation, Spaſms, and other Accidents, that are wont to ariſe upon theſe tranſverſe Sections; which beſides leaves a wide gaping Ulcer, obnoxious to many Inconveniences, that at the beſt end in a very rugged and unſeemly Scar. *4thly*, The Nerves, Veins, and Arteries are to be avoided as much as poſſible in this Proceeding; for by wounding the former, Pain, Fluxion, Inflammation, and Convulſions, are the attending Accidents; as an Hæmorrhage or great Flux of Blood is of the latter; which if not timely remedied, might infer thoſe Conſequences, as *Hippocrates* hath taken notice in this remarkable Aphoriſm: *Ex ſanguinis profluvio, deliratio, aut etiam convulſio, malum eſt.* *5thly*, In large Abſceſſes the contain'd Matter is not wholly to be evacuated at once, leſt by the ſudden and too great Diſcharge, the Forces or Strength of the Patient ſhould be proſtrated, and a Syncope or Swooning ſucceed. For with the purulent Illuvies a great many Spirits exhale, which diſtilling from the Extremities of the broken nervous Fibres into the Cavities of the Abſceſs, are ſubject upon its Apertion to fly off, and thereby prevent that Exerciſe of the animal Functions

for a Seaſon. *6thly*, The Operation is to be performed as quickly and gently as the Caſe will permit; for herein lie the diſtinguiſhing Marks of a good Artiſt, whereby he may be known from the rude and ignorant, who never can perform the manual Part of Surgery with that Neatneſs and Dexterity that is expected from the able and experienced Workman. *Laſtly*, After the opening is made, and the Contents evacuated, the Ulcer is to be treated according to the preſent Circumſtances; for as Pain, Hæmorrhage, Fainting, *&c.* do in theſe Caſes very frequently occur, a ſuitable Apparatus muſt be ready at hand to obviate them if need be, which being effected, we may then proceed to the next Intention, the Cure of the Ulcers; whereof I ſhall diſcourſe in the following Chapter, having now finiſhed the moſt material Circumſtances that are requiſite in a Tumour.

CHAP. VII.

Of Digeſtive Medicines.

WHEN a Tumour is opened, and of an Apoſtemation becomes an Ulcer, a like Indication to the foregoing ariſeth, that is, a Digeſtion or Converſion of the ichorous Gleet (iſſuing from the Lips of the newly divided Abſceſs) into the Form of a laudable Pus or Matter; effected by the Mediation of proper Remedies, going

going under the general Term of Suppuratives; which although in that Senſe they may ſeem merely adapted for the Sake of Abſceſſes or Tumours, yet are they no leſs indiſpenſably neceſſary here in promoting the Cure of Ulcers.

In order therefore to make a Diſtinction of 'em, I have made uſe of the Word Digeſtive, to ſignify the Concoction and Tranſmutation of the ſaid crude Humour into due Matter; an Intention moſt neceſſary and uſeful in the firſt State of compound Wounds and Ulcers; as *Hippocrates* long ago obſerv'd, commanding that all contuſed Wounds, *&c.* ſhall be brought to Suppuration, in order for a more ſpeedy Cure. Which Opinion is ſeconded by *Galen*, *Celſus*, and all the ancient Profeſſors of the Art; whereto the Moderns, except a few, have all likewiſe aſſented. Mr. *Belloſt*, (though otherwiſe a judicious Surgeon) is one of the moſt principal in inveighing againſt the Uſe of ſuppurative and putrefactive Medicines in all Caſes whatever.

But as both Reaſon and Experience are againſt him, we ſhall acquieſce in the Determination of the major part: For as *Galen*, 13 *Therapeut.* hath truly remark'd, in the Suppuration of Abſceſſes, the Abundance of Matter ſometimes exceeds the Force of the Applications, ſo that they ſeem unable to digeſt the whole; therefore Reſpect muſt be had to both the Indications, that is, to the Tumour and Ulcer, as the latter cannot be healed before the former be taken away, and the Figure of the Part reſtor'd to its primitive Form and Nature. To accompliſh which, the crude undi-

geſted Matter muſt be concocted, and chang'd into a more benign Quality, and the ſuperfluous Serum diſcuſs'd, by the Help of warm Remedies that may equally contribute to both Deſigns, the Heat evaporating, as well as digeſting at the ſame Time; ſo that the one will recover its Tone and priſtine Figure, whilſt the other is put into a regular Form of healing: Whence Practitioners do always look upon this Intention as one of the principal and primary for this Work, as appears from the Monuments of the Ancients, who all unanimouſly agree in this, *viz.* that a firm and laudable Incarnation can't be hop'd for in the aforeſaid Caſes, by the Help of ſarcotick Medicaments, unleſs a due Digeſtion hath been firſt premis'd, in order to render the ſucceeding Superſtructure more firm and ſtable.

Hence as all Diſeaſes have their proper Stages, wherein a different Remedy is requir'd to each, ſo in like manner here are we oblig'd to obſerve the ſame Rules: The crude Matter muſt firſt be concocted (for the Safety and Preſervation of the Part as lately hinted at) before it can be duly deterged, and ſo of the reſt. For it may be look'd upon as a general Rule, that where Crudities cannot wholly be remov'd by general Evacuations, they are to be alter'd and tranſmuted into another Nature by Concoction. Now conſidering that the Tone of the Part is very much weaken'd, and conſequently the concoctive Faculty (or natural Heat) therewith much impair'd, partly by the Fluxion, and partly alſo by the ambient Air acting thereon: Nature in theſe Caſes cannot make a lau-

a laudable Digeſtion of the ſaid Crudities, without the Aſſiſtance of Art.

For if in the former Caſe an additional Heat was thought neceſſary to aſſimilate and concoct the extravaſated putrifying Humours into one homogeneous Form, where a containing Capſula or common Tegument inclos'd and defended thoſe Juices from the rehears'd Injuries and Inconveniencies attending; how much more is the ſame indiſpenſably of Service, where the naked Fibres and Extremities of the corroded Veſſels are immediately expos'd to the Influence of that Element, whoſe nitrous Particles cannot fail of affecting thoſe ſenſible Bodies with an ungrateful Stimulus and Senſation; whereto the acrimonious Serum impregnated herewith, may probably concur, if the ſame was not obtunded and corrected by the ſoft balſamick Quality of the digeſtive Applications, which, like to the foregoing Suppuratives preſcrib'd for a Tumour, are by *Galen* 5. *Simpl.* 6. appointed to be of a temperate Quality, correſponding to the Nature of the Parts to which they are adhibited, as moſt likely to agree therewith, and thereby avoid thoſe Accidents that an Exceſs of Quality might occaſion. And therefore we find them (generally ſpeaking) of a moderate, warming, and humecting Faculty, which co-operating with the natural Heat, tranſmutes the contus'd Solids, together with the extravaſated Fluids, into that ſimilar Form and Appearance, call'd Pus, or Matter. But before we enter into a Detail of the Remedies appropriated for this Subject, 'tis neceſſary firſt to underſtand, that as

Heat and Moiſture are equally the Parents of Putrefaction, as well as the concurring Cauſes of Maturation, the Uſe of digeſtive or ſuppurative Medicaments are not convenient in all Ulcers, as *Hippocrates* hath declar'd in *Aph.* 22. *Lib.* 5. in theſe Words: *Calidum ſuppuratorium (inquit) non in omni ulcere magnum ad ſecuritatem indicium exhibet, &c.* For as the Prince of Phyſick truly remarks, it ſoftens the Skin, and relaxeth its Contexture, and by that Means prediſpoſeth it toward a State of Putrefaction, eſpecially where a previous Tendency of the Humours leads that Way: And therefore is forbid in all Caſes where a Colliquation of the Solids is imminent; as *Galen* hath plainly made appear in his Comment upon the aforeſaid Aphoriſm, where he ſaith; *Quæcunque autem Ulcera putredini ſunt obnoxia, & quæ partes circumſtantes exeſas habent, & quæ difficulter ad cicatricem perducuntur, univerſa minimè ſuppurantur; & quæcunque ex malis ulceribus propriis nominibus inſigniuntur, veluti quæ Cancroſa, Chironia, Telephia & Phagedenica, id eſt, carnem comedentia nominantur, hæc omnia Ulcera non ſuppurantur.* But in all others I find no Exception, wherein they may not be us'd with the greateſt Advantage, until the Matter appear laudably well conſtituted; whoſe diagnoſtick Signs are excellently well delineated by *Hippocrates, Lib.* 1. *prædict. Aph.* 46. in theſe following Words: *Pus optimum eſt, ſi candidum, æquale, leveque & quam minime fœtidum eſt; maxime verò contrarium huic deterrimum.* The like we meet with in *Corn. Celſus, Lib.* 5. *cap.* 26. who ſaith, that well-concocted Matter ſhould be white,

ſmooth,

ſmooth, equal, of a good Conſiſtence, and void of any offenſive Smell; which Tokens being all apparent, together with a diminiſh'd Quantity of the Contents, indicates a laudable and duly digeſted Ulcer, and therewith a Change of the Dreſſing, for ſomething more ſharp and cleanſing.

The exact Time requir'd for this Work, (of Digeſtion) cannot certainly be limited to a ſtated Number of Days, as ſome would have it; ſeeing the Nature of the Part affected, the Temperament of the Subject, the Quality of the Wound or Ulcer, with ſeveral other Circumſtances occurring, may ſo alter and vary the Efficacy of the Medicament, (wherewith 'tis exactly to agree in all Reſpects) as to put this beyond all Diſpute: For theſe Remedies are to be continu'd until the whole Matter becomes concocted, and exhibits all the recited Appearances: Unleſs we have a Mind to anticipate the Date thereof, and carry on two Intentions at once, (a Thing very common with ſome Perſons) we may then uſe the ſame Method deliver'd in the firſt general Intention of a Tumour, wherein Repellents are appointed ſolely to be adhibited at the primary Inſult of the Fluxion, and afterward during the whole Augment of the Diſtemper they are order'd to bear the Predominancy over the other, to the very laſt Stage or Height thereof; ſo in like manner, if we would work rationally in this Caſe, the digeſtive Faculty muſt exceed that of the deterſive, while as yet the Humours are crude and thin; but as they approach nearer to a State of Maturity, theſe latter may proportionably be increas'd, until at laſt they

bear the whole Sway. For which Deſigns, the terebinthinate Claſs ſeems to bid faireſt, as partaking both of a digeſtive and deterſive Nature, whereby it wipes out thoſe Excrements that it concocts, and for that Reaſon is moſt in uſe amongſt Practitioners, either mix'd with Hog's Lard, Butter, Honey, Yolk of an Egg, or ſuch like Ingredients, that may ſeem moſt ſuitable for the preſent Intention; whereto may be added, the fam'd *Liniment. Arcæi*, and the *Baſilic. Nigr. vel Flav.* either ſimple, or mix'd with the Precipitate, which forms a moſt excellent Medicine, that even in ſpite of the Empirick will cure of it ſelf, eſpecially the more ſimple Affects, wherein it will ſatisfy moſt, if not all the four Cardinal Intentions: But in the more complicate and rebellious, I have found the alkaline Powders and lixivial Salts to be of more Service. The former, doubtleſs, by obtunding and altering the Acidity or Corroſiveneſs of the Serum, becomes digeſtive, as doth the latter by ſtopping the Pores, and converting the excreted Matter into a Cruſt: For in malign and rebellious Ulcers, where the Contents are very acrimonious and corroſive, theſe Medicaments commonly have the beſt Effect, as may be prov'd from daily Experience, which teaches, that wherever an Ulcer yields difficultly to Digeſtion, and is attended with a continual Waſte and Conſumption of the Solids, an acrimonious Serum is generally the Cauſe of it; for which, no ſpeedier Cure can be attempted, than the potential or actual Cautery (where the ſame can be admitted:) And although I have often

ten experimented the good Effects of the abſorbing alkaline Powders ſtrew'd lightly over the Face of ſuch Ulcers, yet I always found the Eſcharoticks, or thoſe inducing a ſlight Cruſt thereon, to be more efficacious and ſpeedy in the inveterate and contumacious Kind; provided the ſame do not partake of a cancerous Nature or Diſpoſition: For how far this Treatment will extend that Way, is ſomewhat to be queſtion'd; ſeeing the Ancients do not patronize any ſuch Undertaking; nay, even the actual Cautery, that of all others is the moſt ſimple and void of Danger, is here, notwithſtanding, put under a certain Limitation; that is, where the Caſe only is ſuperficial, and ſeated in ſuch Parts, that the Roots of it may be wholly extirpated by the Inſtrument; for otherwiſe the Patient is brought into the moſt imminent Danger; as appears from *Galen*'s Comment on *Aph.* 38. *Sect.* 6. where diſcourſing upon the Uncertainty of Cure in theſe Caſes, he breaks out into this remarkable Expreſſion: *Nam & qui Cancrum in palato conſtitutum, & in ſede, & in ſinu muliebri, vel uſſerunt vel ſecuerunt, non potuerunt ulcera ad cicatricem perducere, & homines in cura afflictos ac maceratos, uſque ad mortem pertulerunt.* Which he farther confirms by his own Experience; ſaying, *Equidem ſcio omnes qui hujuſmodi Cancros curare tentarunt, magis illos irritaſſe, & brevi homines interemiſſe*; a dreadful, but true Prognoſtick, deliver'd by an excellent Judge, whoſe Authority ought to forewarn all unexperienc'd Perſons how they attempt the Eradication of a Cancer by a Cauſtick, whoſe Event is ſo precarious,

rious, that unleſs we were certain of exterminating the Cauſe, *i. e.* the atrabilious corroſive Salts lodg'd in the Maſs of Blood, together with the Affect it ſelf, which is a great Uncertainty, if not an Impoſſibility, ſo long as they remain unalter'd by proper Internals; we unavoidably run the Riſque of making good the Prediction of *Curati enim cito pereunt*, pronounced by *Hippocrates* himſelf in the forecited Aphoriſm.

If this then be the Caſe, as undoubtedly it is, what Streſs can be laid upon thoſe Noſtrums ſo frequently bragg'd of for this Uſe? Several Inſtances whereof may be met with in the Obſervations of *Riverius* and others: But the moſt principal of all is that of Dr. *Alliots*, who in a Treatiſe publiſh'd ſome Years ago at *Paris*, acquaints us, that he hath attained to the Knowledge of curing an ulcerated Cancer (without Uſtion or Exciſion) by means of a fix'd alkaline Salt, that won't run *per deliq.* like to the other alkalous ſaline Subſtances, whereby they exaſperate the Malady. But this fix'd Salt (ſaith he) maketh an Eſchar, and converts the acrimonious Humour into laudable Pus, and thereby cures the Cancer. How far this Aſſertion will ſtand the Teſt of experimental Practice, I muſt refer to thoſe who have ſeen the Proof of it, and in the Interim reſt contented with ſuch Helps as our own Invention will afford us, until this celebrated Noſtrum be made publick; the whole Myſtery whereof lying chiefly in finding out a fix'd alkaline Salt that will not run, but cauſe an Eſchar upon the Part, afford us Hopes of meeting one Time or other with a *Succedaneum*

cedaneum, that may come up to it. Something near relating to it hath occurr'd in my own Practice, wherein remarking frequently the good Effect of cauterizing rebellious Ulcers, and having try'd many eſcharotick Remedies upon different Subjects and Caſes, it was my good Hap to meet with one at the laſt, that hitherto hath ſcarce once fail'd my Expectation, in correcting the corroſive Humour of malign and eating Ulcers, and digeſting the ſame into laudable Matter, effected by the like Means of the foregoing, *viz.* by inducing a ſmall Cruſt or Eſchar, upon whoſe Separation the Ulcer appearing clean and florid, hath afterward incarn'd and cicatriz'd as ſpeedily and firmly as could even be hop'd for from one of the ſimpleſt and mildeſt Sort. But yet I can't go ſo far as to aver that the ſame Succeſs will ariſe in cancerous Diſpoſitions; for it does not appear how any external Medicament can correct and alter the Virulency of the Humour that caus'd the Induration in the Glandules; and granting it was really capable to be effected, either by conſuming the whole Body of the Gland, or contemperating the Malignity of its Contents; yet as the Parts adjacent are equally tainted with the like Venom, as is evident from the lead-colour'd and turgid Veins, replete with atrabilious Blood ſtagnating about the Avenues of the tumify'd or ulcer'd Part, it ſeems almoſt impoſſible wholly to remove this dreadful Complaint, without either extirpating the very Roots of it, as *Galen* hath appointed for ſuperficial Cancers, or otherwiſe by altering and amending the Craſis of the Fluids, which is the more

more eligible: For *Cornelius Celſus* rehearſing the different Methods of Cure us'd in his Time, declares the fatal Conſequences attending 'em thus: There are ſome, ſays he, who in this Caſe uſe burning or cauſtick Medicaments; others the actual Cautery, or hot Iron; and others again extirpate or cut them off with the Knife: But neither hath the one or the other been follow'd with Succeſs; for whether they have burn'd with the actual or potential Cautery, the Diſtemper being irritated thereby, hath forthwith appear'd again, and increas'd, until it has kill'd the Patient; and likewiſe when Exciſion of the Cancer hath been us'd, and the Part afterward cicatriz'd, yet has it return'd, and caus'd the Death of the afflicted Sufferer: Therefore he adviſeth, that ſuch Methods be avoided; ſeeing that many Perſons who have us'd no Helps at all, except ſome lenient and mild Applications, to demulce and appeaſe the Pain, have arriv'd happily by thoſe Means to a great old Age. And laſtly, for our farther Direction, he adviſeth us rightly to diſtinguiſh between a cacethick and carcinomatous or cancerous Ulcer; the former being capable of Cure, the latter not; which may be known only by Time and Experiment: As for Example, when ſuch a doubtful Caſe preſents it ſelf, if you apply burning or cauſtick Medicines, and the Pain and other Symptoms be eas'd by them, we may proceed to its Eradication by the Knife or Fire: But on the other Hand, when by the ſame Means the Malady becomes exaſperated, 'tis a certain Token of a Cancer, whereto all acrid Medicaments are highly

preju-

prejudicial. Thus from the Authority of this Great Man are we taught, where the recited Remedies are ſerviceable, and where detrimental, as likewiſe by *Hippocrates* and *Galen* in ſeveral Places, from whence we may infer, that whatever happy Effects have been attributed to this or that Remedy for the Cure of a confirm'd Cancer, are only referable to thoſe malign and corroſive Ulcers, call'd by *Celſus*, Cacoethicks.

But to return to the milder and more common Digeſtives; which, as we ſaid, conſiſted of a temperate Heat and Humidity, conjoined with an emplaſtick Subſtance; whereby they become excellently well qualified to ſmear over the eroded Fibres and Extremities of the capillary Veſſels, preſerving them from the Annoyance of the external Air, while the Work of Concoction is going forward by the Mediation of the natural Heat aſſiſted by that of the topical Application; which for the moſt part are diveſted of ſharp ſtimulating Particles, or at leaſt have them ſo invelop'd and wrapp'd up in a ſoft mucilaginous or gummy Subſtance, as to prevent their doing any Injury to the nervous *Fibrillæ*; whereby Pain, Fluxion, and other Accidents might be excited, if not guarded againſt by the ſoft balmy Parts of the Medicaments, which not only obtund the ſaline *Spiculæ* of the Serum, but alſo tranſmute it into a more ſmooth eaſy and homogeneous Form; whence we ſee the abſolute Neceſſity of this good old Method, without which an imperfect and tedious Healing muſt be expected, to the great Uneaſineſs and Trouble of the Patient; and for

that

that Reaſon ought to be promoted by all Endeavours; only obſerving that often inculcated Precept, of having a due Regard to the Temperament of the Body, as well as the Part affected, together with the recited Circumſtances, delivered in ſeveral of the foregoing Intentions; according to which Diverſity, ſaith the judicious *Fallopius*, the Medicaments are to be diverſified: For, as *Galen* remarks, Sarcoticks in ſome Subjects will become ſuppurative in others, and *vice verſa*; therefore every Part muſt be ſuited with a like Remedy; as for inſtance, a ſanguine well conſtituted Habit of Body, attended with a ſimple Ulcer, ſeated in a muſculous or fleſhy Part, will digeſt with the ſimpleſt and mildeſt Remedy, ſuch as that common and well known Dreſſing, *Ex Terebinth. Venet. cum Vitell. Ovi, &c. præparat.* or even the common Baſilicon will ſerve the Turn. Whereas a cold humid Temperament, afflicted with an Ulcer of the like Nature, occupying a cold ſimilar Part, will require the more ſtrong, upon the Account of the Intemperies, that muſt be corrected and removed by more warming and drying Remedies, ſuch as *Liniment. Alcæi* mixt with Rum; or the *Balſ. Terebinth.* applied warm; which are very uſeful Dreſſings in ſuch Caſes; whereto a Portion of Precipitate may be added to correct the Laxity of the Fibres, and abſorb the ſuperfluous Serum, either mixed with your Digeſtive, or ſtrewed lightly over the Bottom and Sides of the Ulcer, if foul or ſordid; always avoiding, in ſuch Caſes as are attended with a lax and putrid Diſpoſition, all ſlabby and unctuous

ctuous Medicaments, which would increaſe the Putrefaction: And therefore the common warm and moiſt Suppuratives were forbid by *Galen* to be uſed in putrid Ulcers, and thoſe conjoined with a Fluxion; ſaying, that in ſuch they often do much Hurt; and more eſpecially, where the *Aponeuroſis* of the Muſcles, or their tendinous Expanſions are concerned, wherein nothing but the dryer Remedies can ſafely and effectually be uſed; of which Kind are the recited *Balſ. Terebinth.* and the *Liniment. Arcæi*, whoſe Compoſitions are exempted from any noxious Quality this way; and for a greater Security we uſually add to the latter a ſmall Quantity of Rum, or Brandy, to rouze up the native Heat of the Part, in order to forward the Intention, and alſo to correct the humid Diſtemperature incumbent thereon, as lately obſerved. Laſtly, we are to obſerve, that as a Fluxion and Inflammation (ariſing from the hot and ſharp Serum) are often the attending Accidents of this Stage, they are to be reſiſted in the Beginning by a ſuitable repelling Bandage, with a proper Defenſative applied near to the Part affected, where the Veſſels are moſt conſpicuous, and leaſt bolſter'd up with fleſhy Muſcles; for in thoſe Places they afford the greateſt Benefit, according to the Doctrine of *Hipp. Aph.* 23. *Sect.* 5. who ſaith, that Cold is profitable where there is or will be a Fluxion of Humours; not that it ſhould be applied to the very Place, but to the Parts about it, to prevent its Influx; and if there be any Inflammation, *&c.* tending to a red and bloody Colour, cauſed by a new

Fluxion, then apply cold Things to them, *&c.* But Care muſt be taken that neither the Defenſative nor Bandage be put on too tight, leſt inſtead of only ſtopping the Defluxion, we obſtruct and hinder the due Circulation of Humours in the Part; whereupon a great Tumour and Inflammation muſt neceſſarily enſue, the Conſequence whereof (if not timely removed) may probably be a Gangrene, as we have ſometimes known.

Theſe Things being diſcuſſed, and the crude Humour duly concocted, we are then to mix deterſive Remedies with the premiſed Applications, or uſe the Mundificatives alone, as Occaſion ſhall require; obſerving that when the Pus hath obtain'd all the neceſſary Qualifications aforementioned, 'tis full time to proceed to the other Intention, leſt by the too long Continuance of ſuch Dreſſings, the Ulcer ſhould become ſordid, as will appear in the following Chapter.

CHAP. VIII.

Of Deterſive *or* Mundificative Medicines.

WHEN by the Aſſiſtance of the foregoing Remedies, Nature hath made a perfect Concoction of the ſerous or ichorous Gleet, and from a State of Crudity advanced it into the Form of laudable Matter; the next Intention in a gradual Procedure commands the abſterging or cleanſing it, according to the Doctrine of *Rhaſis* 13. who

who adviſeth, that when Digeſtion in a Wound or Ulcer is fully accompliſhed, the Medicaments promoting that Deſign ſhould be laid aſide, and inſtead thereof, others of a more drying and deterging Faculty ſubſtituted, leſt otherwiſe the hot and moiſt Medicines appointed for digeſting the crude Humour, ſhould at laſt by the Force of Heat convert the ſaid ripen'd Matter into a more thick, groſs, and viſcid Subſtance call'd Sordes, to the great Obſtruction of the Cure.

Which *Valeſius* having in his Eye, made this juſt Remark, that all Ulcers require drying and deterging. For, ſaith he, an Ulcer is render'd ſordid, not only by thoſe Things which are moderately humecting, but alſo by thoſe that dry leſs than is meet. Therefore a Neceſſity ariſeth for changing the premiſed Dreſſings, for others of a deterſive or cleanſing Faculty, whoſe Efficacy conſiſting in Heat and Dryneſs, as their ſharp and ſtimulating Pungency ſufficiently declares, renders them very ſerviceable both for exterging the Sordes, and abſuming the Sanies, which by the ſtated Law of Nature (as *Hollerius* obſerves) are left after the Nouriſhment of the Part. For it is to be underſtood, that the alimentary Juices are inceſſantly diſtributed to all Parts of the Body, in order to their Refection and Reparation; and while the Parts are ſound and retain their natural Vigour, the Superfluities are thrown off by Perſpiration (either ſenſibly, or inſenſibly:) But when their Tone, through any accidental Cauſe, becomes weaken'd or much impair'd, the Recrements of the third and laſt

Concoction are ſuffer'd to ſettle in the vitiated Member, whereupon are produced thoſe two kinds of Excrements diſtinguiſh'd by the aforeſaid Titles, *viz.* the groſſer call'd *Sordes*, and the thinner *Sanies*; wherefrom two ſorts of Ulcers (borrowing theſe Epithets) have aſſumed their compound Denominations; altho' the ſame may be ſaid as ſtrictly and properly to belong to moſt others, wherein the ſaid Excrements are apparent. For whilſt the Part is weak (as muſt be expected in all Wounds and Ulcers, attended with any remarkable loſs of Subſtance) the ſuperfluous Contents cannot duly be expell'd by the recited Evacuations; whereupon they muſt neceſſarily drill down from their proper Tubes into the Cavity of the Exulceration, and there be retained, until by the Aſſiſtance of convenient Remedies, they be expurged and ſcour'd out from the Bottom and Sides thereof (whereto they ſometimes pertinaciouſly adhere.)

And as there is no Time, according to the Remark of the illuſtrious *Galen.* 3. *Meth.* 3. wherein Nature ceaſeth from the Generation of Fleſh: So in like manner is there no Time in which theſe two kinds of Excrements are not bred, and the Ulcer doth not ſtand in need of drying and deterging. Hence we find, that to the very laſt Intention of Cure, Mundificatives are always of Service, more or leſs, to abſterge and wipe off the former Recrements, as well as to dry up the latter.

For which Intention we have a great Variety of Medicaments, of different Forms, Taſtes, and Degrees

Degrees of Quality; whereof ſome are ſimple and others compound, ſome ſtronger and others weaker; all which are to be adhibited, as the Caſe itſelf, the attending Accidents, and preſent Temperature of the Subject ſhall require. Of which more particularly hereafter: Having firſt exhibited a Specimen of ſome of the moſt common, and uſeful for this Work: Wherein is included moſt of the bitter and aromatick Tribe, with ſome few of thoſe endued with a ſweet or ſaline Sapor; excluding all the acid, auſtere, acerb, and rough Taſtes that denote any thing of an aſtringent Faculty, which is contrary to that of Deterſion; foraſmuch as they rather bind up and fix the Humours in the Part, than conduce towards their Expulſion.

Upon which Account, the ſagacious *Hollerius* wou'd have alſo the ſweet, acrid, and ſaline Medicaments to be expunged this Claſs, ſaying, that the former relax, and conſequently encourage and give way to a greater Fluxion and Increaſe of Excrements, whereby the Tone of the Part becomes more weaken'd and impair'd. And *2dly*, All acrid and ſharp Medicines fill the Cavity with a Colluvies of Sordes. And *laſtly*, Saline ones, in like manner, very often aſtringe, and fix the ſaid Humour; and farther, vellicate and twitch the Fibres; for which Reaſon they ought to be rejected.

But as Experience doth not on all Accounts confirm his Reaſoning, I ſee no reaſon wholly to relinquiſh them; ſeeing they may upon ſome Occaſions be uſed as ſucceſsfully as any of the others

going under this general Denomination. Therefore I ſhall not ſcruple to allow them a Place here, ſince the Authority of *Fernelius*, ſupported by other Perſons of note, is a ſufficient Counterballance (ſetting Experience aſide) to eſtabliſh them.

This laſt mention'd Author hath divided them into three Degrees or Orders, according to the different Qualities and Uſes he attributes to them: The firſt and mildeſt he appoints to waſh out or deterge the concocted Matter of open'd Phlegmons; the ſecond and ſtronger are to cleanſe out the groſſer Sordes of Ulcers; the laſt and ſtrongeſt are to conſume and wear away the corrupt Fleſh of malign Ulcers, and the Calloſity of Fiſtulas, *&c.* But as theſe only regard the preſent State of the Ulcer itſelf, without deſcending into other particular Circumſtances of no leſs moment, we ſhall keep the ſaid Diviſion, but rank them according to the different Taſte they bear.

Beginning with the bitter Tribe firſt, as moſt numerous and extenſive: Of this ſort are the Roots of *Ariſtolochia* or Birthwort, Gentian, *Florent.* or Orrice, the Leaves of Wormwood, Centaury, St. Johns-wort, Savin, Rue, Scordium, Celadine, Mugwort, Fumitory, Southernwood, Smallage, Succory, Parſley, the Meal of Lupins, Vetches and other Pulſe; whereto ſeveral of the gummy and reſinous kind, may be added as equally ſerviceable to the Intention; of which the moſt common is Myrrh, Aloes, Frankincenſe, Sagapenum, Opoponax, Bdellium, Venice and and Common Turpentine, *&c.*

Theſe

Theſe as they are a Medium betwixt the ſtrongeſt and weakeſt kind, and coincide with *Fernelius*'s ſecond Diviſion, may very properly be uſed to ſcour out the groſſer Excrements of Ulcers, according to his Appointment.

The ſecond and mildeſt Tribe are thoſe of a ſweetiſh, or at leaſt inſipid Sapor, ſuch as Sugar, Honey, Manna, and the Compoſitions prepar'd from them: To which may be annexed theſe Vegetables, *viz.* Melilot, Roſes, Violets, Plantain, Barley and Bean Flour, with ſome others of a like Nature, which may very well be omitted. Theſe correſponding with the firſt Order of our Author's, may ſerve not only to deterge phlegmonous Ulcers, but alſo other ruptur'd Abſceſſes, where the Matter is well digeſted, and ſmall in Quantity, the Ulcer ſuperficial, and the Temperament of the Body of a lax and ſoft Diſpoſition, as in Children, Women, and the like tender Habits, which always require the mildeſt Remedies. Laſtly, the acrid and ſaline Medicines (the ſtrongeſt of all) which, as our Author truly ſaith, approach near to a catheretick Nature; for they not only conſume the ſuperfluous Excrements in Wounds and Ulcers, but very often the ſubjacent Bodies themſelves, eſpecially if too long continued to the Part.

Therefore it was good Advice which *Galen* delivered in the Cure of a dyſepulotick Ulcer, *Lib.* 4. *cap.* 1. & 13. *De Compoſit. Medicament. per Genera*, where he expreſſeth himſelf to this Effect, ſaying, "It very often happens in cleanſing theſe Ulcers, "that a Medicament being once or twice applied

" thereto, is not fit for it the third time, by reaſon " of the Humour being now dried up, which be- " fore obtunded the biting Faculty of the Medica- " ment. Therefore if under your Application, " the ulcer'd Part appear dry and red, a Mordica- " tion is imminent; upon which Account you are " to make choice of a milder Remedy." Of this ſtronger and acrid Claſs, are theſe following, *viz.* Burnt Alum, Verdigreeſe, Vitriol crude and burnt, Sal-Armoniac, Nitre, burnt Braſs and its Scoriæ, Miſyſory, Chalſitis, and the like metalline Recrements, waſh'd, in order to render them more mild and gentle in Operation, by extracting a Portion of their corroſive Salts, wherefrom they deduce their catheretick and even cauſtick Quality. To which may be ſubjoined the famed red Precipitate, the moſt uſeful and mildeſt Remedy of them all; together with that well known Menſtruum, the Lixivium of Wood Aſhes (or any other vegetable Subject) which by the Addition of ſome of the premiſed Ingredients, may by due Coction or Infuſion be formed into many ſerviceable Compoſitions; as Injections, Lotions, Fomentations, *&c.* adapted for this Intention.

Now ſeeing theſe are the ſtrongeſt Mundificatives in Uſe, bordering upon the Confines of the catheretick and cauſtick Fibres, a greater Circumſpection is required in their Application, than in any of the foregoing. For unleſs it be in ſome particular Caſes, whereof our Author hath made mention, as to eat away the corrupt Fleſh of malign Ulcers, and correct the Virulency that it ſpread no farther, as himſelf expreſſeth

it,

it, or to conſume the Calloſity of Fiſtulas, &c. theſe acrid metalline Medicaments (eſpecially thoſe of the ſtrongeſt kind) are ſeldom or ſcarce ever adhibited ſimply or alone, but always mix'd with ſome ſoft unctuous Subſtance, that may infringe their Force, and contemperate their Acrimony, which otherwiſe would be rather apt, by colliquating the Solids, to induce a putrid Diſpoſition in the Ulcer, than to anſwer the Property of a good Deterſive; whereof *Galen* hath given us an excellent Caveat by way of Example in the Hiſtory of a certain Empirick (of the *Theſſalian* Sect) who dreſſing a ſordid Ulcer with a green, acrid, and eating Medicament, diſſolved the Fleſh, and thereby made the Ulcer more hollow, whence enſued a greater Pain and Fluxion upon the Part; whereby it happened, that continually adding more acrid Remedies, being blinded with Ignorance and Error, he encreaſed the Colliquation of the Fleſh, the Amplitude of the Ulcer, and the excrementitious Humidity: Therefore 'twas a good Remark of *Guido*'s (delivered as a cautionary Precept) when he tells us, that the young Surgeon is often miſled in theſe Caſes; for when he ſees the Ulcer to flow more plentifully than uſual with Sanies, he applies all his Endeavours to dry up and conſume the Humidity with acrid Medicines, as if the Humours were excrementitious: Whereas on the other hand, they are rather the *ſuccus nutritius* of the Part; together with a Portion of the colliquated Solids, fuſed by virtue of the acrimonious Quality of the Medicament, which then ought to be changed for one

more mild, that may perform the Intention without fretting and corroding the ſubjacent Bodies.

The deterſive Compounds, of which as yet we have made no mention, are the *Unguent. Apoſtolor. Ægyptiac. major. & minor. Nicotian. Detergens, mundificativ. ex Apio; D° Paracelſi, Balſ. virid. omn. Mel. & Syr. Roſar. Abſinth. Artemiſ.* and in general moſt of the bitter Syrups and melliginous Compoſitions, that partake of no Aſtringency, may commodiouſly be introduc'd into this Claſs; together with divers other anomalous Preparations to be met with in the latter Part of this Work, as ſerviceable, and even in ſome Caſes preferable to any of the foregoing, by reaſon of their different Forms and Qualities, that render them not only more commodious in Application, but alſo upon account of the great Variety they afford, an adequate Remedy of proportionate Strength and Virtue may be ſelected for each Habit, Age, Sex, and Conſtitution of the Patient, as well as the peculiar Temperament, Site, Senſe, and Office of the Part it ſelf, together with the Nature, Quality, and preſent State of the Ulcer. All which ought diligently to be attended to. For as *Celſus* ſaith, *Non omnibus eadem auxilia conveniunt*; which Axiom will hold good in regular Practice, through all the premis'd and ſucceeding Intentions; for as not only the Temperament of human Bodies, and different Parts thereof, vary from one another in Form, Nature, and Degrees of Quality, ſo likewiſe the Caſe it ſelf differs in ſeveral Circumſtances, according as the Humour and Intemperies ſhall diſpoſe it; and

therefore

therefore requires a Remedy of proportionate Strength to that of the Diſeaſe. *Qualis morbus, talis indicatio*, is the exquiſite and conciſe Precept of *Galen*, 9. *Meth.* 12. And again, a great Diſeaſe indicates a great Remedy, is the wiſe Aphoriſm of *Hippocrates*, 6. *Sect.* 1. *& vice verſa:* For to attempt the Curation of a ſordid or callous Ulcer with the mildeſt Deterſives, would, inſtead of mundifying the ſame, rather increaſe the Sordes in the former, and Calloſity in the latter; being not of ſufficient Strength to waſh away and conſume the groſs and harden'd Humours, and for that Reaſon would be more liable to augment than diminiſh the Diſtemper. And on the other Hand, if the ſtrongeſt Mundificatives, or thoſe partaking of a catheretick Quality, ſhould be applied to a laudable and well-concocted Ulcer, where the excrementitious Humour was ſmall in Quantity, and every way well conditioned, they would not only deterge the ſuperfluous Contents, but alſo the natural Juices, and even the very Solids themſelves, and thereby infer the like Accident that befel the Empirick in *Galen*, now lately recited.

The ſame alſo may be attributed to the different Sex, Age, and Habit of Perſons; effeminate, young, and ſoft humid Bodies, muſt have a weak mild Remedy, proportionate to their tender Conſtitution: Whereas adult, tough, maſculine Habits, will ſtand in need of the ſtronger Kind, and that more or leſs intenſe in Quality, according as the Ulcer abounds with a groſs, viſcid, or thin humid Excrement: For that which

ſhall

ſhall prove deterſive in the one, will be found colliquative in the other.

The Senſe of the Parts, too, affords ſome Difference, as do the Ulcers likewiſe themſelves; for thoſe that are endu'd with an exquiſite Perception, as all nervous, tendinous, and membranous Bodies are, or the Affect it ſelf being attended with an acute or ſharp biting Pain, cannot be ſuppos'd to bear with the ſtronger and acrid Remedies, without exaſperating the Malady, and increaſing the Accidents. Whereas the contrary Diſpoſitions muſt neceſſarily call for an equivalent Remedy, whereto ſometimes the ſtrongeſt and ſharpeſt Cathereticks (particularly if attended with a callous Lining or Margin) will only be of Force and Service.

Laſtly, Where an inflammatory Heat, or bileous Eruptions, accompany a Wound or Ulcer, all ſharp ſtimulating Medicines muſt be avoided, until the Intemperies be corrected, and the Part reſtor'd to its primitive and natural Craſis, and then only the ſofteſt and moſt agreeable Deterſives are of Uſe. From all which is apparent, the abſolute Neceſſity of having a Variety of Medicaments that may correſpond to each particular Circumſtance, according as the Indications ſhall direct: Which *Hollerius* hath briefly ſumm'd up after this Manner. "In the Uſe of Deterſives, (ſaith this grave Author) "Regard is firſt to be "had to the whole Body; as whether it be heal-"thy, plethorick, or cacochymical. Secondly, "The Nature of the Part is to be conſider'd, "whether dry, or humid, or endu'd with an ex-

"quiſite

" quiſite or dull Perception. Laſtly, Whether " ſome preternatural Accidents have not occur'd, " as Calloſity, Defluxion, Pain, Putrefaction, " and others of the like Kind, according to each " of which the topical Application is to be ſuit- " ed in Quality or Temperature." And farther we are to conſider, whether it be a recent or inveterate Ulcer, ſituate in a ſoft or hard Body; for where the Affect is new, and the Habit of the Body ſoft and humid, the Ulcer neither too ſordid, nor putrid, and the Part moreover of a quick Senſe, the milder Remedies are then convenient: But where the Ulcer is annual, and of a cacoethick or dyſepulotick Nature, fix'd in a hard tough Body, replete with groſs, ſordid, and other vitious Humours, and the Part of an obtuſe Perception, the ſtrongeſt Deterſives are requir'd, as the learned *Fuchſius* hath expreſly declar'd, ſaying, " When the Part is of an acute Senſe, the " Cure is to be attempted with the gentleſt Me- " dicines, and with as little Pain as poſſible; " for as much as thoſe ſenſible Parts cannot bear " the acrid Medicaments without great Dolor; " whereby the Forces are proſtrated and reſolv'd: " But where they are of an obtuſe Perception, " the ſtronger Remedies (if the Caſe require it) " may be us'd; becauſe ſuch Parts eaſily bear the " Force of the biting ſharp Medicaments, even " in an intenſe Degree, without any remarkable " Injury." Therefore the aforeſaid Author concludes, that unleſs the Remedies be adhibited in a fit and convenient Manner, exactly accommodated to the Temperament of the Part, and Nature

ture of the Affect, they avail little or nothing towards the Cure. Which *Hoffman* being well appriz'd of, declar'd he verily believ'd that this (*i. e.* a Neglect of a due Obſervance herein) is one of the chief Cauſes that makes the Cures ſo very often ſlow and unſucceſsful: And truly how ſhould it miſs, when an Exceſs or Defect of Quality are equally culpable and obnoxious to the ſame Inconvenience; that is, of fouling the Ulcers? From whence I ſhall conclude with this ſhort Remark, that each Patient, Part, and Affect, as above deſcrib'd, muſt have their due and fit Meaſure, agreeable to their Strength and Temperament, and then there is no doubt but they (that is, the Medicines) will duly and rightly perform their Offices, whether of deterging the Ulcer, or any other Intention relating thereto, which being effected, the deterſive Applications muſt then be chang'd for others of a milder and leſs biting Quality, leſt Pain, Fluxion, Inflammation, and worſe Accidents ariſe from the Irritation of the nervous Fibres expos'd to the acrid and ſtimulating Particles of the Medicament; which ſaid Stimulus, or acute Perception in the Part, is look'd upon by *Galen* as one of the diagnoſtick Signs of a well-cleans'd Ulcer.

What remains, we are oblig'd to *Celſus* for; who in *Lib.* 5. *cap.* 26. *p.* 208. hath deliver'd himſelf in a very comprehenſive and intelligent Manner; ſaying, *Tum demum verò purum ulcus eſt, cum rubet, ac nimium neque ſiccum, neque humidum eſt: Contrà quod ſenſu caret, quod nimium aut aridum aut humidum eſt, quod aut pallidum, albidum, livi-*

dum

dum vel nigrum eſt: Id non eſt purum. Which is to this Effect: If the Ulcer be red, clean, and neither too dry nor too moiſt, then it is ſufficiently mundified; but, on the other Hand, if it be inſenſible, and appear either too dry, humid, pale, white, livid, or black, it is then foul, and not duly cleans'd; and therefore cannot as yet admit of Incarnation: For it is almoſt impoſſible to lay a firm and ſolid Foundation upon the Ruins of the corrupted and putrified Solids; for which Cauſe they muſt firſt be abſterged and cleanſed, before either Nature or Art can attempt the Regeneration of new Fleſh; an Intention that next methodically falls in Courſe.

CHAP. IX.

Of Sarcotick Medicines.

THE foregoing Intention being duly ſatisfied, and the Ulcer appearing of a clean, red, and lively Colour, is next to be incarned, which, according to *Galen*, 3 *Meth.* 3. is ſolely the Effect or Work of Nature, (*i. e.* a due Temperament of the Whole, as well as the Part it ſelf;) for as that illuſtrious Phyſician obſerves, when the Habit is no ways preternaturally affected, but retains its natural Craſis, or Temperature, the Fluids likewiſe (conveying the *Succus Nutritius* to the Part) equally well conſtituted, offending neither in Quantity nor Quality, it muſt then neceſſarily happen that the Work of Incarnation will proſperouſly

perouſly go forward, although there was no outward Help adminiſter'd at all.

But as in the Regeneration of Fleſh (like as in other natural Mutations perform'd in the Body) a twofold Excrement, as afore obſerv'd, the one thinner, nam'd *Ichor*, or *Sanies*, and the other groſſer, call'd *Sordes*, are generally produc'd, and through a Default of the expulſive Faculty, where the Tone of the Part becomes weaken'd by Wounds or Ulcers, ſo that they cannot be naturally expell'd and thrown off, the Aſſiſtance of Art is call'd in to remove thoſe Impediments out of the Way; for this End, ſarcotick Medicaments are appointed, being of a moderately drying, cleanſing, and warming Faculty, whereby they ſeem very proper for the Deſign in Hand; as thus the exſiccating Quality ſerves to abſume and dry up the thinner or more watery Humour, whilſt the Mundificative is levell'd againſt the Sordes, or groſſer Lentor. The kindly Warmth, and gentle Aſtringency, wherewith they are alſo endow'd, contributes greatly to this Work: Firſt, by preſerving the natural Heat in the Part whilſt the healing balſamick Juices are employ'd in cementing and tranſmuting into new Fleſh; and Secondly, by correcting the Laxity and ſuperfluous Growth thereof, the Incarnation is render'd firmer, which otherwiſe wou'd be looſe and ſpongy: But as theſe ſarcotick Medicines are only deſigned to cleanſe away the Recrements of the third and laſt Concoction, left after the Appoſition and Aſſimilation of the aforeſaid nutritive Particles of the Blood, and not therewith to conſume the new-

ly

ly regenerated Fleſh; they are therefore almoſt wholly to be diveſted of any Acrimony or Mordication: For as *Weckerus* truly remarks, Incarnatives ought not to have ſo great a drying Force as with the Sanies to abſume and waſte the Blood it ſelf, nor ſo great an exterging Faculty as with the Sordes to wear away the tender Fleſh: For which Cauſe, the Ancients ranked them in the loweſt Degree of Dryneſs, being neareſt to the human Temperature (generally ſpeaking:) Yet as there is a great Latitude in the Temperaments of Bodies, and even in the very Parts themſelves, they wiſely divided theſe Medicaments into three Degrees or Orders, to prevent thoſe Errors which they foreſaw would unavoidably accrue from their promiſcuous Uſe; for they are not indifferently to be applied to all, as *Galen* 3 *Meth.* 7. hath expreſly declar'd; ſaying, (in Refutation of the Methodiſts) that it is an extreme Madneſs to ſuppoſe that there is one common Method of Cure for all Perſons. *Nam nihil eſt quod æquè cunctos delectat homines*, is a true Axiom of the old *Theban* Poet, *Olymp.* 8. that will hold good here: Therefore they are to be varied according as the different Circumſtances ſhall indicate, which as they are various and manifold, ſo in like manner are the Remedies thereto appropriated, whereof ſome are ſimple, others compound, ſome mild, and others again more ſtrong and powerful: Of the firſt Sort are Barley and Bean Flour, Powder of Fenugreek, Lupins, and Frankincenſe; theſe are reckon'd in the loweſt Claſs of Simples: The ſecond and ſtronger comprehends ſeveral of the gummy

Tribe, ſuch as Myrrh, Maſtick, Olibanum, Aloes, Sarcocolla, Gum Elemi, Turpentine, Roſin, Dragon's Blood, Gum Arabic, Colophony, Honey, crude or clarified; with ſeveral others of the like Nature: Together with ſome of the vegetable Subjects that may be included under this Head; as St. John's Wort, Sanicle, Scabious, Vervain, Yarrow, Comfrey, Betony, and the like; wherein a temperate Dryneſs and Aſtringency may be perceiv'd. The laſt and ſtrongeſt are ſubſtracted partly from the deterſive, and partly from the epulotick Claſs, and therefore are very extenſive and numerous; out of which we ſhall ſelect ſome of the moſt uſual: Such are the Powders of Florentine Orrice, Birthwort, Lapis Calaminaris, Tutty, Pompholix, burnt Lead, Crabs Eyes, calcin'd Hartſhorn, Oyſter Shells, or any other burnt Bones; which in ſome Caſes I have found more effectual than all the reſt of the ſarcotick Tribe put together: For where a corroſive or ſharp Humour frets and conſumes the new-made Fleſh, theſe alkaline Powders are frequently the beſt Remedy, inaſmuch as they imbibe and obtund the Acrimony of the virulent Ichor, that hinder'd the Intention. But it is to be obſerv'd, that when any of theſe gritty Powders are made uſe of, either ſimply or compounded, they ought always to be levigated, and reduc'd into a moſt impalpable and ſubtil Alchohol; leſt by the Rigidity and Sharpneſs of their Particles, the tender nervous Filaments ſhou'd be irritated or wounded, whereupon Pain, Fluxion, and Inflammation might ſucceed.

The

The compound Medicaments are the *Liniment. Arcæi*, *Unguent. Baſilicon*, *Nigr. & Flav. Balſ. Lucatel. Veſalii*, *Samaritan. ex Terebinth. Ol. & Balſ. Hyperici*, *Unguent. Aureum*, *Nicotian. &c.*

Whereto theſe Emplaiſters may be added; not that they can be ſaid to be properly and truly Sarcoticks, their ſtiff and hard Conſiſtence denying them Admittance into the Cavity of deep Wounds and Ulcers; but as they retain the natural Heat in the Part, (the efficient Cauſe of Incarnation) and preſerve the ſame from the Annoyance of the Air, and other extraneous Bodies, they muſt be allow'd to contribute to this Deſign. And theſe are the *Empl. è Gum. Elemi*, *gratia Dei*, *Betonic. Divin. Andr. Cruc. ſtict. Paracelſ. cerat. Vigonis*, *&c.* which alſo may be of farther Service in correcting the Intemperies of the external adjacent Fleſh, as the foregoing Remedies are appointed to amend the Dyſcraſy of the internal: To each whereof an equal Regard is to be paid, if we deſire a ſpeedy, healing, and laſting Cure. As is manifeſt from that excellent Doctrine deliver'd in *Therapeut. Lib. 3. cap. 8.* to this Effect; that if the exulcerated Fleſh (by any Accident) ſhall become more hot or cold than is meet, it requires a Remedy which doth not only moderately dry, but alſo calefies and refrigerates ſo much as the Part affected hath receded from its natural State: For it cannot be that the Regeneration of Fleſh in an Ulcer, or the Impletion of the Cavity, or the Agglutination or the cicatrizing thereof, (wherein Nature is chiefly concern'd) can ever rightly ſucceed, unleſs the

new incarned Fleſh be made like to the natural, (or that which was there before;) for which Cauſe the ſaid Authority commands us to have a vigilant Eye toward the Temperature of the ulcer'd Parts, as often as we would incarn, agglutinate, or cicatrize; and to obſerve the Motions of Nature, with all the recited Circumſtances in the premis'd Intentions; in order to find out an adequate and fit Remedy that may in due Proportion, Order, and Degree of Quality, correſpond therewith: Which, however ſlight and trivial it may appear to ſome, is yet, in the Opinion of the Learned, the moſt difficult of all others, if we will believe a very good Judge in theſe Matters; who treating of the three ſimple curative Indications, when he comes to the laſt, thus declares his Opinion: *Tertia Indicatio* (ſays *Fuchſius*, *Inſtit. Med. Lib.* 5. *Sect.* 1. *cap.* 2.) *latiſſime patet & omnium longe difficillima eſt, quòd ſcilicet remedia, quibus morbus abigitur, oſtendat.* The Reaſon whereof is plain enough from what hath been ſaid in the preceding Diſcourſe, and alſo what is farther ſubjoin'd by our Author in theſe following Words, *Non ſufficit autem hæc (i. e. qualitates) tantum ſcire; ſed & quantitatem eorum, quæ adhibentur, præſidiorum metiri oportet medicum. Nam ſi quis noverit, verbi gratia, refrigerandum eſſe, nec ſciat quantum refrigerandum ſit, falli eum circa curationem eſt neceſſe: Quotquot enim quantitatem ignorant, & majorem quàm convenit præſidiorum copiam adhibent; hi in contrariam intemperiem corpus imprudentes ducunt: Sin præſidiis imperfectius utantur, exceſſum non tollunt.* Which is alſo confirm'd by *Galen* in ſeveral

veral Places of his *Meth. Med.* who in diſputing againſt the Methodiſts, hath in plain and familiar Terms told us, (in relation to the Caſe in Hand) that if the Sarcotick be either too weak or too ſtrong, 'tis liable to the ſame Inconvenience, *viz.* of rendring the Ulcer ſordid, exemplified by Olibanum or Frankincenſe, that in the more ſoft and humid Conſtitutions will breed Fleſh, whereas in the contrary Temperaments 'twill produce no ſuch Thing, but rather Putrefaction and Corruption; and on the other Hand, the ſtronger Incarnatives, ſuch as Cadmia, Pompholix, *&c.* that in the harder and dryer Bodies will admirably well ſatisfy the Intention, ſhall in the oppoſite Habits excite a contrary Effect, by corroding and deſtroying the Subſtance thereof. Therefore ſaith *Galen* in the forecited Place, he that would rightly cure an Ulcer, muſt duly conſider all theſe Things, (either ſeparately, or conjunctly taken) which for the Satisfaction and Inſtruction of the Ignorant, I ſhall be ſomewhat more particular in; beginning firſt with the Ulcer it ſelf, wherein its State and Condition is to be enquir'd into: As for Example, if the ſame be clean, ſimple, and free from any preternatural Intemperies, inclining rather to a humid Diſpoſition, the Habit of the Body, and Temperature of the Part thereto concurring, the mildeſt Sarcoticks claſs'd under the firſt Diviſion, will very well ſerve the Turn. But if the Ulcer be large, ſubject to Fluxion, and abounds with Excrements, with looſe and ſpongy Fleſh growing therein, the ſtronger Medicaments, with repulſive Bandages, and

other Auxiliaries, are then of Force; and more eſpecially if the Affect be ſeated in a hard dry Part and Habit, attended with the like Accidents, or ſhould partake of a cacoethick, virulent, or malign Nature, the ſtrongeſt of all are ſometimes found weak enough to perform their due Office. Secondly, in reſpect to the Habit of Body, whereon the Cure of the Ulcer does much depend. For if it be of a plethorical or cacochymial Diſpoſition, the Diſtemperature muſt firſt be taken away or corrected, by due Evacuation and other ſuitable internal Remedies, before a ſucceſsful Event can be expected from theſe topical Applications. Thirdly, in the Uſe of theſe Remedies, we are to obſerve, that they are never to be applied before the Ulcer hath been duly mundified, according to the Judgment of *Avicenna*, *(cap. De naſcentia Carnis in Ulcerib.)* who expreſly charges, that no incarnative Medicament be adhibited until due Deterſion hath been premis'd, and there be brought unto it laudable and natural Nouriſhment, *(i. e.* pure Blood) as the ſaid Author farther remarks; if the ſame ſhould offend either in Quantity or Quality, the Work of Incarnation is fruſtrated. And therefore he ſtrictly enjoins us to preſerve the natural Temperature of the Member, and diligently to take care that nothing be drawn unto it but only natural Blood; and this you ſhall do if you defend it from Fluxion and other Accidents that might induce a preternatural Intemperies in the Part affected: For when once the ſame hath taken Place, there can be no regular and hopeful Procedure

Procedure made in this Work, while the Diſtemperature remains; as *Galen* hath plainly made appear when he tells us, there is no Man will attempt to incarn, agglutinate, or cicatrize before the Inflammation be expelled; and all other Accidents, as Pain, Tenſion, Fluxion, *&c.* be removed: For otherwiſe, we ſhall make good that ancient Axiom of *Hippocrates*; *Quanto Nutries, tanto Lædes.* The ſame being applicable to diſtemper'd Ulcers, that the old Doctor attributed to impure Bodies; neither the one nor the other (in that State) being capable of tranſmuting the alimentary Juices into proper Nouriſhment, but rather into an excrementitious Matter; and therefore the more you nouriſh them the greater Damage they receive: But when the Obſtacles come all to be removed out of the way, and the Member hath recover'd its priſtine Craſis or Habit, the Uſe of Sarcoticks may ſafely be ventur'd on, eſpecially if the aforeſaid Rules be obſerv'd; which only require an Equality of Temperament to be kept, betwixt the Medicine, the Subject, and the Diſeaſe.

The due Meaſure whereof, in reſpect of Quality, may be learn'd from *Galen*, *Lib.* 4. *x.* γ. who ſaith, that if the ulcer'd Part obtain that Dryneſs which it had naturally before, ſo that neither Pus nor Sanies flow out thereat in too great Quantity, the Work of Incarnation is good; but if there be more Sordes in the Ulcer than is meet or uſual, and it becomes moiſter, the Medicament hath dried too little; as on the other hand, if it be clean, and without any Humidity, it hath

dried too much. By which Signs (ſays the prudent Author) you may know the Meaſure of the Exceſs and Defect of Quality in the Application, *Meth.* 3. *Cap.* 3. *&c.* To the ſame Effect teacheth *Hollerius* after this manner, ſaying, when the newly incarned Fleſh appeareth ſoft and flaccid, and the Cavity of the Ulcer alſo is attended with plenty of Excrements, or is overrun with an Hyperſarcoſis, 'tis a certain Sign, that the Dreſſings have been too moiſt and ſlabby; whereas on the other hand, if the Fleſh grows dry and wears away, and the Cavity of the Ulcer rather becomes larger than otherwiſe, with hard, dry, and callous Edges, conjoined with Pain, Heat, or Acrimony, 'tis no leſs a manifeſt Token that the ſarcotick Medicine hath been too ſharp and drying, and for that Reaſon muſt be changed for one more mild and temperate: From whence we muſt infer, that the Conditions and Qualifications of a laudable and well incarned Ulcer, whereto convenient and agreeable Remedies have been adhibited, ſhould appear neither too dry nor too moiſt, the Fleſh looking clean, red, and likewiſe feeling firm, and without any intenſe Heat, or manifeſt Coldneſs; ſenſible, but yet without Pain, Intemperies, or any other concomitant Accident annexed, the Medicament ſitting eaſy upon the Part: Theſe Circumſtances concurring afford us Aſſurance that the Intention goes rightly forward, and that the Remedy is ſuitably adapted thereto. For, as *Tagaultius* obſerves from *Guido*, when Medicines applied to Ulcers do Good, or at leaſt no Harm, 'tis an Argument that they are rightly and duly accom-

accommodated; but when they are contrariwiſe, and do Damage, by making the Ulcer more hot, cold, moiſt, or dry than is requiſite or fitting, it ſhews, they are not agreeable nor convenient for the ulcer'd Part; as *Galen* by his Authority hath confirm'd in *Lib.* 3. *Meth. Cap.* 8. where, diſcourſing of the Temperature of the Air, and Qualities of Medicines, he ſaith, that if they induce either too hot or too cold an Intemperies in the Ulcer, they hinder the Regeneration of Fleſh: Upon which ſcore we find that *Hippocrates* and all his Succeſſors, had a particular Regard, not only to the Temperature of Parts and Bodies, but alſo to the ambient Air, as a neceſſary Circumſtance to be conſidered in the Cure of Wounds and Ulcers: Which *Guido* by long Experience found to be true, when he affirmed, that Ulcers of the Legs were far more difficult to heal at *Avignon* than at *Paris*; but quite the contrary happened to Wounds of the Head in thoſe Places; and this he wholly attributes to the Influence of the Air: As likewiſe did *Ambroſe Parey* ſuppoſe that Element to be chiefly in fault, when at the Siege of *Roan* and Battle of *St. Dennis*, all Wounds made by Gun-ſhot were for the moſt part mortal.

Seeing therefore the Air hath ſuch an immediate Effect upon the Body, as to produce wondrous Alterations therein, the Exceſſes of its Quality are to be corrected and amended by the help of external Remedies, according to the Appointment of *Galen*, who informs us, that *Hippocrates* in the colder Seaſons of the Year, uſed a

little hotter Medicines than in the Summer; and ſo *vice verſa* in hot Weather.

Laſtly, The Conſiſtence of theſe Sarcoticks comes next to be conſidered, wherein the too hard and ſtiff Applications, as well as the too ſoft and liquid, are equally culpable and liable to Objections. The former, being not only very incommodious, but alſo very often troubleſome and uneaſy to the Part, can ſcarce ever ſucceſsfully be applied to a pained and tender Ulcer, without incurring the Danger of ſome freſh Accidents; neither to deep Wounds and hollow Ulcers that want incarning, can theſe hard Dreſſings be of any noted Service; by reaſon they would rather check the Growth of the new Fleſh than forward it. And therefore unleſs in ſuperficial Ulcers that are brought almoſt to a due Level, or where a Hyperſarcoſis or luxuriant Fleſh abounds, and the Temperature of the Part is hard and dry, with the like Circumſtances favouring them, they in all others are to be rejected; as the more ſoft and humid are in the contrary: For in lax ſlabby Ulcers, where the Fleſh is looſe and ſpongy, or thoſe upon the point of cicatrizing, all unctuous ſoft Medicaments are certainly prejudicial, inaſmuch as they would forward and promote the Increaſe thereof, which ought rather to be repreſſed and retarded by a different Method. And ſecondly, as their Fluidity diſpoſeth them to run much abroad, and thereby leave the Face of the Ulcer expoſed to the dry Pledgits and other harder Bodies, whence Pain, *&c.* might ariſe, occaſioning moreover a too frequent renewing of the Application;

cation, which *Galen* in theſe Affects hath for very good Reaſons forbid; we eſchew them upon this Account; unleſs in cavernous, fiſtulous, and hollow Ulcers, wherein they may be uſed to great Advantage. And therefore we conclude, that the harder and drier Dreſſings are moſt convenient for the ſuperficial Affects, as the ſoft and humid Applications are for the more deep and profound. But for the general Practice, thoſe obtaining a Medium betwixt theſe two Extremes are far the more eligible, having neither the Inconvenience of the one or the other to attend them (if rightly prepared;) wherein great Care is to be taken in duly pulverizing the Ingredients, and eſpecially the gritty alkaline Subſtances, that no Aſperity or Roughneſs be perceived in the Medicament, which ſhould be ſmooth, equal, and void of all rigid Particles, as *Hollerius* hath wiſely adviſed, ſaying, *Quæ induntur ulceribus, lævia ſint, & contactu ſuavia, ne aſperitate dolorem creent.* To which we ſhall add for a Concluſion, that theſe Medicaments (except the Powders only when call'd for) are to be applied moderately warm to the ulcer'd Part; for an Exceſs or Defect of this Quality will occaſion a ſordid or callous Diſpoſition in the Affect, as I have often obſerv'd, and very probably might have been the Caſe of *Fallopius*, which induced him to leave this bitter Invective *(in expoſit. Lib. Hippocr. de vulnerib. capit.) fugite* (ſays he) *frigus, & calorem (viz. in exceſſu) uti Diabolum*, as doubtleſs very pernicious in Wounds of the Head: But in thoſe of the other Parts, a moderate Degree of Warmth

in

in the colder Seaſons, and a little more remiſs in the hotter Weather, will do no Harm: As lately we have proved from that Authority which he is expounding.

CHAP. X.

Of Epulotick Medicines.

EPulotick or cicatrizing Medicaments, are thoſe appointed to finiſh the laſt Intention of compound Wounds and Ulcers, by covering over the new incarned Fleſh with a proper Tegument, ſomewhat reſembling in Form that of the Cutis, effected by virtue of a drying and aſtringing Faculty (without Acrimony or Mordication) whereby they conſume not only the ſuperfluous Humidities, but alſo the nutritious and natural Juices, falling within the Verge of their Activity. Hence the Surface of the Ulcer becomes hard, dry, and callous, and conſequently thereby puts a Stop to Nature's farther Endeavours, which commonly is forward enough in the Regeneration of Fleſh; and being lately encouraged and aſſiſted in that Work, might now proceed farther than is intended, to the exciting of an Hyperſarcoſis or Sarcoma, if not timely prevented by the Aſſiſtance of aſtringing and drying Remedies; whoſe Efficacy ought ſo much to exceed the Strength of Sarcoticks, as the Skin is naturally harder, dryer, and more compact than the Fleſh; on account

account of their converting the Surface of the latter into a proper Covering, that may ſupply the Office of the true Skin, and correſpond therewith in Form and Quality; although not exactly alike in all Points, as *Galen* hath remarked. For this new made Subſtance is not the true Skin indeed, inaſmuch as the Cutis being a ſimilar and nervous Part form'd by Nature in the Womb, can never be regenerated again when loſt or periſhed, thro' the Defect (as Authors ſay) of ſeminal Matter; and therefore Neceſſity calls in the Help of Medicine, to ſupply ſomething analogous to it, that may retrieve the priſtine Beauty and Decorum of the Part; and likewiſe guard and preſerve it from the Annoyance of extraneous Bodies, whereto each Moment it would otherwiſe be obnoxious.

The efficient Cauſe hereof, ſaith *Fallopius*, is ſomewhat doubtful, whether of Art or Nature, each laying an equal Claim to the Intention. In the Behalf of Nature is produced the regular Order ſhe obſerves in forming a Cicatrix round the Margins of the Ulcer firſt, and then gradually covering the Reſidue; and alſo the frequent Cures effected this way, when no outward Remedies have been applied at all; together with ſeveral other Caſes, wherein Nature (in ſpite of a prepoſterous Method) hath proved herſelf the beſt Phyſician: And on the other hand, *Galen* himſelf at the Head of a numerous Tribe of Authors appears in the Defence of Medicine, alledging the cacoethick and dyſepulotick Ulcers, that hardly and even with the utmoſt Difficulty admit of a Cicatrix; altho' attempted

with

with the moſt powerful Medicines; wherein Nature hath alway the leaſt ſhare in Cure, and in the more ſimple Affects attending a lax and humid Temperament, the preceding Intention is commonly carried ſo far as to render this latter ſomewhat troubleſom to accompliſh.

And therefore in the Deciſion of this Controverſy, *Fallopius* will have both Art and Nature to concur in this Deſign, telling us, that Nature being not hinder'd in her Operation, fills up the Ulcer with new Fleſh, even to the Surface of the Cutis, which for want of farther Nouriſhment becomes dry, and eſpecially that Part of it firſt hardens that adjoins to and is contiguous with the neighbouring Skin, which being of a dry Nature, gradually exſiccates the ſame; and ſo on of the reſt, till the whole be accompliſhed and perfected: Whereto the ambient Air is ſaid to lend a helping Hand. For as he (with *Bartholine* and ſeveral other modern Anatomiſts) obſerves, that in new-born Infants, the whole Cutis then appears ſoft, red, and of a ſanguineous Colour; but afterward, being expoſed to the cold Air, the ſame grows daily harder and whiter, the Blood being repell'd and driven back from the Extremities of the evaneſcent capillary Veſſels, into the larger and interiour Canals (by reaſon of the ſudden Chilneſs of that Element acting thereon) leaves the exteriour Tegument deprived of its uſual Nouriſhment, whence it becomes more white and dry.

Yet

Yet as this only relates to Infants, whoſe tender Fleſh muſt neceſſarily acquire the recited Form and Qualities from the cold Air, I cannot ſee of what farther Service it can be to them, or to Adults much more, in ſatisfying this Intention; ſeeing Experience doth not vouch for it, but rather teſtifies the contrary: For granting the excretory Tubes may thereby be compreſs'd, and their Diameters ſtraiten'd, and ſo ſeem to favour the Deſign in Hand, yet as the crude Serum is by that Means ſqueez'd out, which together with its natural Sharpneſs and ſaline Quality, conjoin'd with the nitrous Particles of the cold Air, cauſes a moſt bitter Pain, Redneſs, and Fluxion; to the great Detriment of the Patient, and Prolongation of the Cure; as is ſufficiently evident by incarned Wounds and Ulcers, when expos'd to its Influence: For which Cauſe, I muſt here reject it as unprofitable, and have Recourſe only to thoſe Means from whence a more immediate Help may be expected: For it is certain that neither the natural dry Temperature of the Cutis, nor the conſtringing cold Faculty of the Air, can ever be able to check and repreſs (in ſome Subjects whoſe Blood abounds with luxuriant nutritious Particles) the Growth of the new-incarned Fleſh, to form at a due determin'd Pitch an equal, ſmooth, and level Cicatrix, without the Aſſiſtance of Art or Medicine to give the finiſhing Stroke to it.

For this neceſſary Piece of Service, the *Materia Medica* furniſhes us with a competent Stock of Remedies, drawn from the Vegetable, Mineral,

ral, and Animal Kingdoms; ſome of which act merely by virtue of a drying and adſtringing Faculty, (call'd properly and truly Epuloticks, as) deſign'd to conſtringe and purſe up the minute Orifices of the Veſſels, abſorb and dry up the Humidities, and harden the extuberant looſe Fleſh into a callous Subſtance.

Of this Sort, are the Roots of Biſtort and Tormentill, the Leaves of Bramble, Horſetail, Cinquefoil, Knotgraſs, Myrtle-Berries, Flowers and Bark of Pomgranates, Oak, Tamariſk, Balauſtins, unripe Galls; and in general all Vegetable Subjects partaking of a rough, ſouriſh, and corrugating Sapor, may profitably be introduc'd for this Work, under divers Forms and Compoſitions, according as the preſent Circumſtance ſhall direct: Whereto may be annex'd, ſeveral of the agglutinative Claſs, which although not peculiarly adequated to this Intention, by reaſon they do not wholly come up to that Degree of Quality which *Galen* hath appointed in *Meth.* 3. *cap.* 5. to conſume not only the preternatural ſuperfluous Humidity of the Part, but alſo ſome Portion of that which is natural; and thereupon has poſitively declar'd that the epulotick Medicine ſhou'd be a great deal drier than that which doth agglutinate; yet in reference to certain Habits, ſuch as Women, Children, *&c.* the following may merit a Place amongſt the Epuloticks; ſuch as the Powder of Bole Armoniac, ſeal'd Earth, Dragon's Blood, Alloes, Calophony, Sarcocolla, Labdanum, and ſuch like adheſive Subſtances, which by their Stipticity ſhut up the Pores,

Pores, and at the ſame Time exſiccate the contain'd Humours.

But theſe only extend to the mildeſt Caſes, and tendereſt Subjects; for in ſuch only they can be applied with any Proſpect of Succeſs: In harder and drier Bodies they would become purely ſarcotick; and therefore, for ſuch, Practitioners have preſcrib'd more powerful, conſtringing, and drying Remedies; ſome whereof are diveſted of all Acrimony, and others have a notable Sharpneſs conjoin'd: The former in common Practice take in ſeveral of the metalline and foſſil Tribe; ſuch as Pompholix, burnt Lead, *Ceruſſ. Minium*, *Lapis Calaminaris*, Tutty, Blood Stone, Quick Lime waſh'd and dry'd; together with ſeveral more of the like Nature and Quality, that may be fetch'd in from the alkaline teſtaceous Claſs, whoſe drying, abſorbing, and edulcorating Faculty, hath gain'd them Credit for correcting the Virulency of malign Ulcers, and afterwards hardening their Surface into a firm and durable Cicatrix; which *Guido* and *Tagaultius* from *Galen*, long ago obſerv'd, ſaying, *Si hæc omnia medicamenta arida ulceribus malignis ac contumacibus inſperſeris, mirifice (inquit Galenus) videbis, citra eroſionem ea deſiccari, ſicut ubi buccinorum purpurarumque, oſtreorum (ſepiarum) aliorumque id genus oſtracordermorum piſcium teſtas concrematas, & (ut addit Aëtius) lotas adhibueris.*

Yet ſeeing there is a great Latitude in the Nature of all theſe Ulcers, ſome being more rebellious and difficult of Cure than others, it is alſo neceſſary (as the aforeſaid Authors have appointed)

ed) to be prepar'd with divers Remedies of different Faculties and Degrees, that may ſuit with each particular Caſe and Subject. " For, ſaith *Galen*, " 'tis no Marvel if they be often fruſtra- " ted in their Succeſs, who with one and the ſame " Medicament think they ſhall heal or cicatrize " all malign Ulcers." Therefore for the more contumacious and inveterate Affects attending a hard dry Temperament of Body or Parts, the ſtrongeſt and moſt powerful Deſiccatives are of Service, even thoſe partaking of ſomewhat a corroſive or ſmall acrid Quality, are often the moſt beneficial; as Experience, and the Authority of the Ancients, hath confirm'd to us: Who in the like Caſes us'd Chalcitis, Miſy, burnt Braſs, Stibium, and Calx of Antimony; burnt Allum, Vitriol, and the like foſſil and metalline Recrements; which by Aduſtion obtain a manifeſt Acrimony or Sharpneſs, that like to the Cautery (inducing a ſlight Cruſt upon the Part) conſume the virulent Ichor that hinder'd the Intention: But being waſh'd and dry'd, they loſe their corroſive Quality, and become moſt excellent Epuloticks, according to the Doctrine of *Galen*, 5 *Simpl.* 15. & *Meth.* 3. *cap.* 5. and other Places.

The officinal Compounds appropriated to this Deſign, are the *Empl. Griſeum, ſeu Lapid. Calaminar. & Cerat. noſtr. ejuſdem Diapalm. de Bolo, Unguent. Tutiæ, Diapompholig. Nutritum, alb. Camphorat. Deſiccat. Rubr. &c.* together with many of the ancient Troches now out of Uſe; and therefore may well be omitted, ſeeing the foregoing (with the fam'd dry Lint, either ſimple or prepar'd)

par'd) are abundantly ſufficient to ſatisfy what is here deſir'd.

The Time of their Application is when the Incarnation hath approach'd to its utmoſt Bounds, or is brought near upon a Level with the adjacent Skin, at which State the beſt Opportunity is offer'd for making a ſmooth and equal Cicatrix: For if the ſame was attempted ſooner, a hollow, unſeemly Scar, wou'd be the Iſſue; as on the other Hand a rugged and too prominent one muſt neceſſarily be expected, by waiting till Nature hath rais'd the new Fleſh to an Equality with the Cutis: As appears from *Therapeut.* 13. *cap.* 5, *&c.*

The Reaſon whereof is evident from what we have premis'd, wherein we obſerv'd, that Nature is ſeldom deficient in repairing the Loſs of Subſtance; but rather, *è contra*, too quick and haſty; and therefore commonly is before-hand with the young Artiſt, who being not appriz'd thereof, generally goes on with the Work of Incarnation, until the new Fleſh be grown too high; whence ariſes a moſt filthy and deform'd Cicatrix, if not timely remov'd by the Help of proper Cathereticks: To prevent which Trouble, 'tis beſt to ſet about this Intention of cicatrizing the Ulcer when the Incarnation riſeth near to the Borders of the Cutis, being yet rather a little lower than the Surface of it, not regarding the Middle of the Ulcer, although it ſhould then appear ſomewhat deeper or hollower than its Margins: For we are to know, that in all Ulcers (ſaving the recited dyſepulotick and malign Kind) that require cicatrizing, the Fleſh is always, or at leaſt for

the moſt part, loweſt in the Middle; and for that Cauſe more powerful Deſiccatives are requir'd to dry up and ſkin over the Edges, that otherwiſe would be apt to grow too prominent and luxuriant: To effect which the more ſpeedily, *Galen* in the forecited Book and Chapter, hath appointed the epulotick Medicaments to be both actually and potentially dry. But as the Middle of the Ulcer ſtands in need of a little Incarnation or filling up, the cicatrizing Remedy muſt be of a ſoft and moiſt Conſiſtence there, in order to carry on the two Intentions at one Time; the exſiccating and aſtringing Quality preventing the too haſty Growth of the regenerated Subſtance, whilſt the unctuous Faculty of the Compoſition gradually promotes the Incarnation in manner of a Sarcotick, until the whole at laſt be brought to a due Equality or Level with the reſt; which being accompliſh'd, the unctuous or humid Epulotick muſt again be chang'd for a dry one: Such as the recited Powders of *Lapis Calaminaris*, *Tutiæ*, *Saturn. uſt.* &c. which being finely levigated, may be inſpers'd gently over the whole Surface of the Affect, with a dry Pledget, Compreſs, Bandage, &c. to finiſh the Dreſſing.

The leaden Plate too being beaten very thin, ſmooth, and even, (which I had omitted) is likewiſe a moſt excellent Epulotick in cicatrizing not only the ſimple, but alſo the malign and more rebellious Ulcers; and even in cancerous Diſeaſes, (as *Etmuller* and other Practitioners teſtify) it hath been found of no mean Service; by virtue of its refrigerating and anodyne Faculty, it allays the excru-

excruciating Pains proceeding therefrom: But whether this may be attributed to the narcotick Sulphur inherent in its Principles, (as ſome affirm) or to the great Quantity of crude Mercury contain'd therein, (as the aforeſaid Author, upon *Schroder*, would have it) is not very material; ſeeing each of 'em, whether taken together, or apart, will admirably well anſwer the Deſign, as the fam'd mercurial *Lamina*, (or leaden Plate ſmear'd over with Quickſilver) ſo much extoll'd by *Ambroſe Parey* for its Efficacy in this Intention hath ſufficiently prov'd; yet as the Incommodiouſneſs of its Form renders it ſomewhat uneaſy to the Part, by reaſon of its Hardneſs and Preſſure, and alſo very inconvenient for Bandage, I rather (unleſs for depreſſing the pouting and unequal jagged Lips of malign Ulcers) prefer *Fernelius*'s Powder of Lead for this Deſign, or a Malagma which I have invented for the ſame Uſe, whoſe Efficacy is no leſs conducive than either of the foregoing; the Receipt whereof may probably be exhibited in the latter Part of this Work. I ſhall now in the mean while conclude this Subject with the ſame Advice that hitherto hath been deliver'd, *viz.* as the Medicaments are divided into different Diviſions, according to their various Natures and Qualities, it is thereby intimated that they are appropriated for different Uſes, and that not indiſcriminately to all alike: For againſt this have all Practitioners declar'd, expreſly charging that the Conſtitution of the Body, Temperament of the Part, and Quality of the Ulcer, ſhall be equally conſider'd; for that which in one

Perſon ſhall prove epulotick, will in another become ſarcotick, and in ſome Habits catheretick. The ſame holds good in reſpect of the Affect it ſelf; for no Man converſant in Surgery would apply the Powder of Miſy, Sory, Chalcitis, burnt Braſs, and the like acrid Subſtances, to cicatrize a ſimple Ulcer, ſeated in a tender Subject, and moiſt Part; which notwithſtanding are the only Remedies for dyſepulotick and ill-condition'd Ulcers. "Therefore, ſaith *Fallopius*, ſoft and humid Bodies and Parts, indicate the Choice of the weaker Medicaments; as do the contrary Circumſtances the more ſtrong: The ſimple Ulcer will cicatrize even of it ſelf, or by the Help of the ſimpleſt Remedy; ſuch as a little dry Lint, *&c.* whereas the annual and complicated Sort will hardly yield to the ſtrongeſt Kind (although adhibited in the moſt powerful Form.) Hence (ſaith he) we are not to begin with the mildeſt Sort firſt, and ſo gradually aſcend to the ſtrongeſt of all:" For *Galen* hath taught quite otherwiſe; but we are to adapt them as the preſent Circumſtances ſhall direct, wherein the Nature of the Remedy requires a like Attention; as *Marianus Sanctus Barolitanus* hath adviſ'd us, in the Words of *Cornelius Celſus*, ſaying, *Ignorari non oportet, quod non omnibus ægris eadem auxilia conferant, & idcirco eſtote prudentes in componendis medicaminibus, ne aliquando vobis accidat dicere, non putâram.* To avoid which unprofitable Expreſſion, it behoves us diligently to conſider the Degrees of Quality the Ancients rank'd 'em in, though the Doctrine is generally exploded at this Day:

Day: Yet as they were the moſt perfect Maſters of their Art that ever appear'd in the World to grace a Science, and conſequently knew the Qualities of Medicines as nicely as any one did ſince, and likewiſe how to apply them to the beſt Advantage, we muſt then, if we hope to reap that Succeſs which ſo conſtantly attended their Endeavours, follow the ſame Steps that they with ſo great Wiſdom and Integrity have mark'd out for us; which through this whole Work I have endeavour'd to retain, as the moſt eaſy and comprehenſive for new Beginners. The *Paracelſian* Principles, I own, make a ſplendid and fair Appearance, and the analytical Examination of Bodies made thereon, ſeems fully to confirm the Truth of the ſaid Doctrine; but as the ſame ariſes from tortur'd Subjects forc'd by the Violence of Fire, it cauſes many to ſuſpect that the old Axiom of *Nihil dat, quod non habet*, is ſometimes fallible; which made our Countreyman, Dr. *Read*, to ſay, (after he had fully examin'd and duly conſider'd the chymical Principles) that he thought it the ſafeſt Courſe to inſiſt on the Footſteps of the Ancients, as a Method moſt plain and eaſy (and alſo moſt inſtructive.) "For no Man (ſaith he) "can deny that there are four Humours in "the Blood, as may appear when drawn out of "the Veſſels; but that there are Salt, Sulphur, "and Mercury, lodg'd therein, is not ſo mani-"feſt, and therefore is ſomewhat controverted a-"mongſt themſelves, and plainly denied by o-"thers." But waving any farther Diſpute about this Matter, I ſhall conclude with *Galen*, (by making

king ſome little Variation in his Words) that whoſoever ſhall undertake the Cure of any Diſtemper, and be ignorant of the Nature and Qualities of the Remedy thereto appropriated, muſt neceſſarily deceive both himſelf and Patient: For how ſhall he be able to correct the Errors of Nature when ſhe works wrong, or aſſiſt her when in a right Method, who neither knows the Compoſition of Medicines, nor the Virtues and Faculties thereof? And conſequently neither the due Quantity wherein they ought to be adhibited. And this (how dangerous and fatal ſoever to the poor unhappy Sufferer) is yet too common amongſt the baſe Intruders into the Art of Medicine, who, to uſe *Galen*'s Expreſſion againſt *Theſſalus*, are as fit for Practice as an Aſs is for the Harp. But leaving ſuch to their due Reward, (of Scandal here, and Puniſhment hereafter) I ſhall proceed laſtly to remark, that if there be any Intemperature of the Part, it muſt firſt be remov'd before the Ulcer can be cicatriz'd; according to that excellent Doctrine deliver'd in *Meth.* 4. *cap.* 5. which teacheth, that if there be either a Phlegmon, Œdema, Echymoſis, or an Eryſipelas, in the ulcerated Part, the Curation muſt firſt be begun therewith: "For certainly, ſaith the wiſe old Doctor, "it is not poſſible to "heal the Ulcer, until the ſaid Accidents be firſt "cur'd." And farther, if a varicous Veſſel nouriſh the Affect, the Varix muſt be ſuppreſs'd before Cicatrization can be attempted; or if a Calloſity affect the Margins or Borders thereof, the ſame muſt be extirpated by Knife or Medicine, before

before the Intention can be duly ſatisfied. Theſe being the Impediments of Cure, I have inſerted purely for the Sake of the young Artiſt, in order to fix them more firmly in the Mind: For as the late Dr. *Read*, inculcating ſome uſeful Precepts, breaks forth into this remarkable Axiom, *Nunquam ſatis dicitur, quod nunquam ſatis diſcitur*; a Subject ſo very uſeful can never be too often repeated.

CHAP. XI.

Of Styptick Medicines.

HAving finiſhed all the regular Intentions that are requir'd in the rational Cure of Tumours and Ulcers, in which I have endeavour'd to explain all that is needful to be underſtood upon thoſe Subjects, it now remains to treat of thoſe Accidents that more particularly belong to wounded Parts; whereof the Hemorrhage is one of the moſt formidable, both in Appearance and Event: For of all the Train of Symptoms that attend external (and even internal) Maladies, there is none more dreadful, fatal, and ſurprizing, than what this tragical and bloody Scene of Horror bears along with it; exhauſting the Forces, together with the Blood, the Treaſure of Life: Whence Lipothymy, Syncope, Convulſion, and other ominous Symptoms, are uſually the *Prodromi* or Forerunners of approaching Death; as *Hippocrates* of old obſerv'd, when he deliver'd this cer-

tain Prognoſtick, ſaying, *Ubi ſanguis plurimum fluxerit, ſingultus aut convulſio ſuperveniens malum. Aph.* 3. *Sect.* 5. which he farther confirms *Lib.* 7. *Aph.* 9. ſpeaking to the ſame Effect. Wherefore as this Effuſion, when it is violent and profuſe, not only hinders the neceſſary Means of reuniting the Lips of the Wound, in order for a ſpeedy Cure, but likewiſe brings Life into the moſt imminent Danger. It is therefore immediately to be repreſs'd by all poſſible Endeavours, unleſs the bleeding be ſmall, and the Patient of a plethorick Body, or ſanguine Conſtitution; in which Caſe it may be ſuffer'd to flow a little more liberally; for thereby the Pain, Inflammation, and ſymptomatick Fever (a concomitant Accident to all contus'd and large Wounds, eſpecially when ſeated near to ſome noble or ſenſible Part) will be in a great meaſure prevented. But on the other Hand, when the ſame flows impetuouſly from a large Veſſel or wounded Artery, no Delay can then be admitted of, without incurring the utmoſt Peril and Danger: As *Celſus* teſtifies in *Lib.* 5. *cap.* 26. ſaying, that all Wounds of the large Veſſels are dangerous; becauſe by the Profuſion of Blood the Patient's Forces are exhauſted: But thoſe made in the Fleſh (where the ſanguiferous Canals are more ſmall and ſlender) are in effect moſt ſafe, and void of Danger. For Experience teaches that theſe latter will ſtop of themſelves, although there be no Medicament applied at all; whereas the former will ſcarce yield to the ſtrongeſt Applications that Art can contrive: For which Cauſe he adviſeth us diligently to conſider whether

ther the Affect be curable or incurable; and alſo, whether the Hæmorrhage proceed from an arterial or venal Canal: Which that we may be aſcertain'd of, *Avicenna* 4. *Tract.* 2. *Cap.* 16. hath left us theſe following Tokens. *1ſt*, The arterial Blood leaps out by Jumps and Starts, according as the Artery makes its Syſtole and Diaſtole, but the venal flows out in one continued uniform Stream. *2dly*, The arterial is more bright and florid than the venal. *3dly*, The former is thinner, and does not ſo ſoon coagulate, or run into Grumes as the latter, and therefore conſequently is far more dangerous; altho' the latter, when ſituated deep amongſt the Muſcles, Tendons, Nerves, *&c.* where topical Remedies cannot commodiouſly be adminiſtred, is ſometimes found no leſs embarraſſing and fatal than the other; as *Cornel. Celſus* in the forecited Place aſſure us.

To reſtrain which, the Antients have been very ſollicitous in the Invention of various Remedies, which I have included under this common Term of Stypticks; dividing them into three Claſſes or Tables. Beginning with the mildeſt Sort firſt, wherein I ſhall comprehend all thoſe Medicaments, that without Acrimony may put a Stop to this Effuſion. And theſe commonly are ſuch as partake of a glutinous and tenacious Faculty, whereby they firmly adhere to the Orifices of the bleeding Veſſels, and as it were glue up the Mouths thereof. Of which kind *Galen* makes mention, *Therapeut. Lib.* 5. *Cap.* 3. *&* 5. ſaying, There are ſome Medicines, that by virtue of their groſs and clammy Conſiſtence, do ſtop the Pores

Pores (and Orifices of the Veſſels) whereby the grumous part of the Blood converts into a Cake or Cruſt, call'd by the *Greeks Thrombos*; which kind of emplaſtick Medicines he adviſeth us rather to make uſe of, than thoſe call'd Eſcharoticks; by reaſon the Wound is ſooner and with leſs Trouble incarned or agglutinated by theſe than with the other, becauſe there is Danger of a new Flux of Blood upon the Separation of the Eſchar: And therefore theſe ought never to be had Recourſe to, except upon ſome extraordinary Emergency, where the former proves ineffectual, as in large and deep Wounds of the arterial Canals. But in thoſe of the Veins and ſmaller Veſſels, theſe milder ſtyptick or emplaſtick Remedies are alway the moſt eligible for diverſe Reaſons: Of which ſort are the following, *viz.* the Powders of Aloes, Frankincenſe, Olibanum, Maſtick, Mummy, Bole Armoniack, Dragons-blood, Seal'd Earth, Gypſum, Acacia, Wheat-flour, *&c.* that may be malaxed (for the ſake of a greater Adheſiveneſs) with the White of an Egg into a due Conſiſtence; as was the Method of that moſt excellent Author, in that well known Compoſition going by the Name of *Galen's Reſtringent Mixture.* Not forgetting that noted Iſchaima or Blood-ſtencher, the *Crepitus lupi* or Fuſs-ball, which of itſelf being applied cloſe up to the Part, will reſtrain the ſmaller Hæmorrhages. The like will Hares-down, and likewiſe the dry Lint itſelf perform, when rolled up into the Form of a Doſſil, Tent, or Button, if preſs'd hard up to the Orifice of the bleeding Veſſel.

Veſſel. For it is to be obſerv'd in the Management of theſe Remedies, that unleſs they be well ſecured upon the Part, they avail very little or nothing, the Blood ſtill ouzing and gleeting out from under the Dreſſings, and occaſioning a frequent Alarm both to the Patient and Surgeon. To prevent which as much as poſſible, the Doſſils, Tents, Bolſters, and the reſt of the Apparatus as uſual on theſe Occaſions, being all ready at hand, are firſt to be armed with ſome proper reſtringent Mixture (eſpecially thoſe immediately concerned about the Operation) and then rolled in a little of the ſaid Powders: Which being done, and the Blood cleanſed away from the Wound, with a Sponge wet in Red-wine, Allum-water, or ſuch like aſtringent Liquor, the ſaid Reſtrictives are to be applied after the recited Manner, in due Order, 'till the Cavity of the Wound (if there be any remarkable Loſs of Subſtance, or the ſame cannot admit of Agglutination) be wholly fill'd up therewith, inducing over all a compreſs or double Bolſter moiſten'd in Oxyterate in order to refrigerate the Member, and inhibit the Fluxion. But if there be any Suſpicion of a future Hæmorrhage, I ſhould adviſe the outward Compreſs to be faced over with a Mixture of Wheat-flour and old Yeaſt, which makes an admirable Reſtrictive, adhering like Glue or Birdlime to the wounded Part; as Mr. Serjeant *Wiſeman* from his own Experience informs us, who with happy Succeſs tried the Efficacy thereof in a very doubtful and dangerous Caſe. Laſtly, with a ſingle or double-headed Bandage you are to

finiſh the Dreſſing; the former being ſufficient for ſimple Affects, is begun (according to the Appointment of *Galen* 5. *Meth.* 4.) with four or five pretty ſtrait Circumvolutions or Turns made round the Wound itſelf, aſcending gradually with the reſt of the Roller toward the Root of the Veſſel, (or ſuperior part of the Member) and there ſecur'd; by which Means the bleeding Veſſel is compreſſed, its Diameter ſtraitned, and the Dreſſings retain'd more cloſe and ſteady thereon: Whence not only a freſh Eruption is prevented, but alſo the ſupervening Accidents, as Fluxion, Inflammation, *&c.*

To this Claſs uſually are annexed ſeveral of the vegetable Tribe conſiſting of an aſtringing and corrugating Faculty; but as they can contribute nothing of moment in external Uſe, I ſhall paſs them over without farther Remark, and proceed next to the ſecond Diviſion of theſe Remedies; which by virtue of an igneous and cauſtick Quality, have Power to ſhrink and ſear up the Orifice of the divided Canal, inducing a Cruſt or Eſchar thereon (from whence they took the proper Denomination of Eſcharoticks) acting much like to the actual Cautery, though with far more Pain and Vehemency, and (as I may truly affirm) with leſs Certainty too: For amongſt all the various Methods that Art hath contrived for this Uſe (ſaving the recited Emplaſticks, and the ſimple Compreſſion made by the Hand or Fingers, which, as *Galen* ſaith, excels all others, in cutaneous and milder Hæmorrhages) there is none more ſpeedy in Operation, leſs painful, or more

ſalutary

ſalutary and certain in the Effect, than the cauterizing Irons are; yet as they carry ſomewhat of Terror along with them, they are generally rejected by the Fearful, and cauſtick Medicines ſubſtituted in their Stead.

In the loweſt Claſs of theſe may be reckon'd the noted Mixture of Umber and *Calx vivum*, malax'd with the Whites of Eggs, and the Down of an Hare, to a due Conſiſtence; which is very much commended by Dr. *Read* (its ſuppos'd Author) telling us that it cauſeth little Pain, and mightily cloſeth the Mouths of the Veſſels; as appeared upon the Stump of an amputated Member, whereto he had applied this Medicine in Form of a Liniment; and when on the fourth Day after the Operation, he came to dreſs the Wound, he found the Orifices of the Veſſels quite ſhut up by Incarnation. So powerful (concludes he) is the Efficacy of this reſtrictive Medicament.

This Hint of mixing Quicklime with Umber, he probably took from *Galen*, who orders, that all eſcharotick Medicines ſhall be temper'd with Aſtringents or Agglutinatives, whereby they more pertinaciouſly adhere. Now, the *Calx vivum* is accounted by that great Phyſician a more vehement Cauſtick, than either Chalcitis, Miſy, or Vitriol: Yet as it partakes of no Aſtringency, the Eſchar produced thereby, ſeparates ſooner than the other, leaving the Part expoſed to a freſh Eruption; and for that Reaſon was by *Galen* rejected in this Work. But when the fiery Quality of the Calx comes to be contemperated by the reſtrictive Faculty of the Umber, or the like emplaſtick

ſtick and fatty Bodies, it obtains all the requiſite Qualifications of an excellent ſtyptick or mild cauſtick Remedy, which according to the recited Authority ſhould ſtick faſt to the Part, even until Nature hath formed (by Incarnation) a new Covering for the bleeding Veſſel; as appears from *Meth.* 5. *Cap.* 4. *&c.* The like we meet with in *Avicenna*, a moſt excellent *Arabian* Phyſician, who always mix'd Emplaſticks and Aſtringents with his Cauſticks; as his Countryman the famed *Albucaſis*, uſed a Mixture of Dragons-blood and Frankincenſe with an equal Quantity of Quick-lime for the ſame Deſign. For theſe worthy Men having learnt from Experience, that great Havock and Devaſtation was made in the Solids, by unguarded Eſcharoticks, and how ſubject the cruſtaceous burnt Subſtance was to ſeparate and fall away from the Mouths of the Veſſels, before they could perfectly be agglutinated or covered over with new Fleſh; (whence aroſe moſt dreadful Hæmorrhages, that, as *Galen* expreſſeth it, could ſcarce be ſtopp'd by Art) did very prudently add ſuch Things thereto, as might render them not only more adheſive and agglutinative, but alſo more tolerable and eaſy to be endured, without deſtroying their cauſtick Faculty. And this being duly conſidered, will lead us to a right Notion of the Nature and Quality of theſe Remedies, wherein ſo much Attention and Circumſpection is required of thoſe who would avoid the innumerable Train of Evils that attend the ſtronger Claſs, eſpecially the arſenical Preparations, and corroſive Sublimate, which are ſeldom call'd

call'd for in Practice, unleſs upon ſome extraordinary and particular Occaſion: The milder ſort, wherein the leaſt Danger reſides, being by the expreſs Command of *Galen* appointed to be choſen. Of which kind the aluminous and vitriolick Medicaments (as enjoying both an aſtringent and cauſtick Faculty) are the moſt efficacious and ſafeſt Stypticks: Whereof many uſeful Compoſitions may be formed. The moſt ſimple and uſual is the Vitriol Button, which being applied hard up to the Orifice of the inciſed Veſſel, and there kept cloſe by ſuitable Deligation, *&c.* with the reſt of the uſual Apparatus, ſeldom fails in putting a Stop to the moſt violent Bleedings, tho' even of an amputated Member. The ſame good Offices will the Colcothar perform; yet not ſo very potently, by reaſon many of the acid Salts are loſt in the Operation, whence it becomes leſs cauſtick, but more aſtringent; therefore it may not be improper to moiſten it afreſh with a Portion of its own Oil, lightly evaporating afterward the ſuperfluous Humidity (or aqueous Particles contracted by the Air) in order to render it more ſharp and corrugating; or in lieu thereof the ſimple Powder of crude Vitriol, or its Calx, applied upon an armed Tent or Doſſil after the recited Manner, may very well ſerve the Turn; whereto (if thought neceſſary) a due Quantity of Allum in fine Powder may be added, upon account of its great Aſtringency; which co-operating with the cauſtick Faculty of the Vitriol, makes a firmer and more durable Eſchar, than when uſed ſimply or alone.

From which ſaid Mixture an excellent ſtyptick Water may preſently be prepared, by diſſolving the ſame in a ſufficient Quantity of Spring-water. This being acuated with the Oil or Spirit of Vitriol to a pretty ſmart Pungency (as may be proved upon the Tongue,) will afford a Remedy not much inferior to ſome of the greateſt Arcana now vended (under pompous Elogies) for this Uſe: And even truly, a ſimple Solution of green Vitriol run *per deliquium* will do as well as ſeveral of the more elaborate and framed Compoſitions that lay claim to this Appellation, whereof there is a great Variety. The moſt celebrated of the vitrolick kind is the Royal Styptick, extant in *Bates*'s *Pharmacopœa*, N° 57. *Pag.* 29. purchaſed by his Majeſty King *Charles* the Second of Mr. *Denys*. But 'tis a very tedious Proceſs, requiring various Preparations to perfect it; *viz.* of diſſolving the Vitriol, precipitating, edulcorating, drying, and impregnating it with its own Oil, and then diſtilling the ſame afterwards. And laſtly, of extracting a Salt from the *Caput mortuum* with Spirit of Wine; and all this is done, only with a view of making ſomewhat a finer and cleaner Salt, than could be expected from the ordinary and common Method, where the Vitriol is committed to the Fire without any previous Depuration; whereas in the Royal Styptick, the Vitriol is firſt cleanſed of its Fæces, which it partly depoſites or puts down to the bottom of the Veſſel during its Solution, and afterward leaves the Reſidue in the filter Paper; whereby the *Caput mort.* and conſequently the Salt extracted from it, becomes

comes more fine and pure. The Edulcoration and Exſiccation is deſigned to diveſt it of the acetous Particles (uſed in the Precipitation) which contribute nothing to the Aſtringency, and for that Reaſon are to be waſh'd off and evaporated; and in lieu thereof the Vitriolick Powder is impregnated anew with the Addition of its Oil, to add the greater Stypticity to the *Caput mortuum*; the heavier acid Salts of that Mineral remaining ſo united to it, as not to aſcend with the Reſidue in Diſtillation, render the Salt obtain'd from the Proceſs more corrugating and aſtringing.

This Rationale I have been more particular in, on Account of the ſingular Efficacy of the Compoſition; which as it is really of almoſt ineſtimable Value when rightly prepared, and the Materials thereof being at a very ſmall Charge, I ſhould adviſe the young Surgeon to be at the Pains of making it himſelf rather than truſt to the Fidelity of others. Yet as it is ſomewhat tedious and embaraſſing, together with the Expence of Time, Labour, and Utenſils (required in the Operation) as likewiſe a competent Skill in Pharmacy, a Succedaneum may be prepared from the common *Colcothar Vitrioli* (left after the Diſtillation of the Oil) which being ſharpen'd with a Portion of the ſaid acid Spirit, and the Humidity afterward evaporated over the Fire, will very probably yield a Salt no leſs ſtyptick than the other.

The *Lachrymæ Martis ſtypt.* a noted Iſchaima, and great Arcanum of ſome Perſons, is ſomewhat a-kin hereto, both in Nature and Quality; whereof there are ſeveral Proceſſes, ſome uſing the Li-

quor that remains after the ſhooting of *Sal martis*, under this Denomination; others the thick fat oleous Matter made of the *Crocus martis* (prepared of the Salt of Steel reverberated to a red Calx) which being run down *per deliquium*, by the moiſture of the Air, affords this moſt noble ſtyptick Medicament; which if not equalling the Preceding, will yet take place of any other that I have hitherto ſeen or heard of. The Proceſs of it may be met with in Profeſſor *Boerhaave*'s new Method of Chymiſtry; which for the Benefit of thoſe that have not peruſed the ſaid Book, I ſhall take the Liberty to tranſcribe: "Take any Quantity of the Vitriol of Steel, dry it gently and pulverize the ſame, then put it into a clean Crucible, and with a ſoft Fire evaporate the aqueous Humidity, whereupon the Vitriol will tranſmute into a whitiſh Calx; but upon augmenting the Heat, the Matter will fuſe, and become greyiſh; and laſtly, by keeping up the Fire, and ſtirring the Medicine all the while, until it ceaſe fuming, 'twill be render'd a perfectly dry, red, Powder, call'd the red Calx of Steel, or more commonly the *Crocus Martis aſtringens*; which being expoſed in an open glaz'd Earthen Veſſel to the moiſture of the ambient Air, will run *per deliq.* into a groſs, thick, unctuous, and exceeding red Liquor, or kind of Oil, conſiſting of the Acid of the Vitriol, the Body of the Steel, and the aqueous Particles of the Air." This Oil is a greater Styptick, Eſcharotick, and Aſtringent, than the *Crocus Martis* itſelf prepared after the aforeſaid

ſaid Manner. And this Calx or *Crocus* (call it whether you will) is, as he tells us, of a wonderful ſtyptick Virtue, inſtantly ſtopping all kind of Hæmorrhages, being applied upon a Pledgit, Tent, or Doſſil, to the Mouth of the ruptured Veſſel, and there retained with the Hand or Bandage; for it immediately purſeth up the Orifice of the ſame, and coagulates the Blood in Contact with it, and alſo corroborates the Part; whereupon he concludes, that it is one of the moſt violent Aſtringents obtainable from Iron; and yet he truly affirms, that this *Ol. Martis per deliq.* is a greater Styptick than it.

This Account if we receive as authentick, as doubtleſs we may, from a Perſon who in his Works hath diſtinguiſh'd himſelf with all the Marks of Candour and Probity; we may then reſt aſſured, that we have here a Remedy as efficacious and powerful for this Deſign as any the *Materia Medica* can afford us.

Next to theſe may be reckon'd the *Aq. Styptica* prepared with Alum and Vitriol diſſolved in its own Phlegm, and acuated with the true acid Spirit or Oil thereof; which likewiſe is a moſt powerful Styptick, as Experience will fully confirm to him that makes Trial of it: The Preſcript may be found in *Salmon*'s Comment upon the *Aq. Styptica Bateana* made with Colcothar, Burnt Allum, *&c.* The reſt of this Tribe being ſomewhat inferior in Virtue, ſuch as the ſtyptick Eſſence of *Helvetius*, and the antiphthiſick Tincture of Dr. *Willis* and *Etmuller*, together with the fam'd *Colebatch*'s Powder, and ſeveral others of

a like ſort; I ſhall refer to the ſecond Part of this Book, where the Reader will meet ſuch Variety, as probably ſome of them may afford him Satisfaction.

I ſhall now conclude this third and laſt Diviſion, with the moſt potent and effectual Remedy yet taken notice of, being uſed only upon the greateſt Neceſſity; *viz.* where the Hæmorrhage cannot be reſtrain'd by any of the aforeſaid Means, then comes in the actual Cautery as a preſent Help and Cure; which is ſo various in reſpect of Figure, that (as *Paræus*, *Lib.* 18. *De Lue venerea*, *Cap.* 27. *De Cauteriis*, &c. truly remarks) it cannot be defined, much leſs ſet down in Writing; for it muſt be varied according to the different Affect, although the Button, Olive, and flat Cautery uſually ſerves the Turn, being applied hard up to the Mouth of the bleeding Veſſel; which *Fabrit. ab Aquapend.* and ſome others of the Moderns, will have to be red and glowing hot: For thereby, ſay they, it procures a more ſpeedy and thicker Eſchar. But Experience teacheth (notwithſtanding the Authority of ſuch worthy Perſons) that when the cauterizing Irons are adhibited in that State, unleſs they receive ſome conſiderable Damp from the flowing Blood, they are rather apt to carry off the burn'd Fleſh along with them, and expoſe the Part to a greater Hæmorrhage. For which Reaſon 'tis more adviſeable and ſecure, to ſuffer the glowing Heat to abate a little (as may be known by the Change of the red fiery Colour) and then to clap the Inſtrument cloſe to the Orifice of the divided Canal, turning

turning the Button, or round End of the Cautery, pretty quickly, twice or thrice round thereon, in order to ſhrink up the End of the Veſſel within the muſculous Fleſh; which being done, and the bleeding fully ſecur'd, the Part is to be dreſs'd up with the uſual Dreſſings required in theſe Caſes, not removing the Applications under three or four Days, as *Galen* hath adviſed.

This Method, however frightful it may appear, is yet more ſafe, expeditious, and eaſy to be endur'd, than many of the milder Eſcharoticks; even the Oil of Turpentine it ſelf, when applied ſcalding hot to the naked Fibres, (as is requiſite in this Intention) brings with it no leſs Pain than the hot Iron it ſelf. For as that judicious Artiſt *Hieron. Fabr. ab Aquapend.* obſerves, a Law and Manner of Operation may be impos'd upon the inſtrumental Cautery, which by no means can be effected in the potential Kind: "The former (ſaith he) "doth not diffuſe it ſelf, or ſpread a-"broad beyond its limited Bounds, neither doth "it corrupt the Parts as the latter doth (occa-"ſioning commonly one miſchievous Conſequence "or other;") for which Cauſe, the ancient Practitioners have with unanimous Conſent given the Preference to the hot Iron: As may be ſeen in *Aetius, Lib.* 12. *cap.* 25. ſpeaking to this Effect; *Longè eſt præſtantius ferramentum quàm medicamentum.* Of the ſame Opinion is *Marcus Aurelius Severinus Pyrotechn. cap.* 1. & 2. who attributed even a divine Virtue hereto, in the Cure of almoſt all external Diſeaſes: But for thoſe who neither can well bear the Sight of the one, nor the

Pain of the other, *Galen* hath order'd the Deligation or tying of the Veſſels, where the ſame can commodiouſly be attempted; which *Ambr. Parey* hath reviv'd, and even aſſum'd the Invention to himſelf, as appears from *Lib.* 11. *De Contuſionibus & Gangrænis, cap.* 24. where he ſaith, that he believes it was taught him by the ſpecial Favour of the ſacred Deity, having never ſeen or heard of its being put in Practice by any other; only he had read in *Galen, Therapeut.* 5. that there was no ſpeedier Remedy for ſtopping an Hæmorrhage, than of tying the Veſſels toward their Roots; which is perform'd after this Manner:

The Ends of the Veſſels (that after the Section uſually retract or withdraw themſelves toward their Roots or Origin) are to be laid hold on and drawn out with a Pair of Crows Bills, or arterial Forceps, comprehending therewith ſome Portion of the neighbouring Fleſh; which, as that expert Surgeon tells us, will facilitate the Conſolidation of the Veſſels; then with a ſtrong double Thread (plac'd before-hand upon the End of the ſaid Forceps in a looſe Knot) the Extremities of the bleeding Canals are to be ſecurely tied, and the Ends of the Thread ſuffer'd to fall off (by Digeſtion) of their own Accord, the Wound being dreſs'd up with Aſtringents or Emplaſticks, after the uſual Manner.

This ſaid Doctrine (without any Deſign of Derogation to his Credit, whoſe Works are a ſufficient Teſtimony of his Abilities) we likewiſe meet with in *Tagaultius, Jo. de Vigo*, and ſeveral others of more early Date, who had taken the ſame

Hint

Hint from *Galen*, and doubtleſs put it in Practice as well as the ſaid worthy Author. But to return to the Subject in Hand: As this Method is only attemptable in amputated Members, where the Ends of the Veſſels can be come at in ſuch a Manner, therefore he teacheth another Way of reſtraining the Effuſion by Ligature; that is, by paſſing a Needle arm'd with ſtrong Thread under the inciſed Veſſel, bringing it out at a proper Diſtance on the exterior Side, and there ſecuring it by tying it cloſe.

Laſtly, As to the twiſting or twining round the Mouth of the Veſſel, by means of a ſmall Hook, prepar'd for that Purpoſe, as *Galen* hath order'd, 5 *Meth.* 3. in order to reſtrain the bleeding, 'tis ſomewhat tedious to accompliſh, by reaſon of the Blood obſtructing the Sight; and the Danger likewiſe of meeting with ſome nervous Body, whence Pain, Inflammation, Convulſion, Fever, and other Accidents, might accrue; which he had principally in View when he ſays that he durſt never ſtitch up tranſverſe Wounds before he had diſcover'd the Apponeuroſes of the Muſcles. The Danger in this Caſe then, being greater than the Benefit that can be hop'd from this Practice, I ſhould rather prefer the Compreſſion of the Veſſel as lately taken Notice of, (till better Help cou'd be adminiſter'd) which even ſometimes of it ſelf, ſimply and alone, hath been experimented of moſt excellent Service where other more potent Remedies had fail'd: As is confirmed by the Teſtimony of many learned Men; particularly *Waldſchmidt*, who gives this Encomium,

ſaying, *Certiſſimum eſt remedium, ſi vas ruptum digitis comprimatur, donec ſanguinis profluvium ceſſaverit, quod principi Aureliæ in capite vulnerato, auxilio fuit.* The ſame we meet with in *Van Horn*, who tells us, that *Leonardus Botallus* ſtopp'd a bleeding of the jugular Vein in his moſt ſerene Highneſs the Prince of *Orange*, only by impoſing a Finger on the Orifice. This Artifice may certainly be ſupplied by ſuitable compreſſive Inſtruments, as the laſt mention'd Author takes Notice of, and render'd full as ſafe and effectual (eſpecially) if aſſiſted by ſuitable reſtrictive and emplaſtick Dreſſings, with convenient Deligation. A very memorable Hiſtory, pertinent to this Subject, is related by *Lanfranck*, of a Child about three Years old, who falling upon a Knife which it carried in its Hand, open'd the jugular Veſſels, from whence iſſued ſo violent a Stream of Blood, that its Life was brought into the moſt imminent Danger. Our Author at that Time paſſing by, was call'd in to relieve this deplorable Sufferer, juſt as the Pulſe begun to fail, and the Sight grow dim: He immediately applied his Finger upon the Orifice of the bleeding Veſſel, to reſtrain any farther Effuſion; and then with a reſtrictive Mixture (prepar'd of Olibanum, Aloes, Hare's Down, *&c.* malaxed with the White of an Egg, to a due Conſiſtence) he cover'd up the Wound, ſuffering it to remain thereon for four Days; in which Time it became ſo dry, and adher'd ſo cloſe to the Part, that it cou'd not be remov'd at the next Dreſſing, before he had thoroughly moiſten'd the Applications: And then (ſaith

(ſaith he) the Wound was, to the great Admiration of the People about him, perfectly heal'd by Agglutination.

But as this was a Wound of the Neck, which always is attended with great Danger, by reaſon a ſuitable Deligation or Bandage can't be made thereon ſo tight as is neceſſary to retain the Dreſſings hard up to the Mouth of the Veſſel, in order to prevent a future Eruption without ſtrangling the Patient; it may be preſum'd that the aforeſaid wary Artiſt had taken due Care to remedy that Inconvenience, by ſupplying it with the Aſſiſtance of the Hand or Fingers, for a conſiderable Space of Time afterward, leſt by ſome unexpected Accident (as hawking, coughing, *&c.* Symptoms very common in ſuch Caſes) an Opportunity might be afforded to the Veſſel for a freſh Eruption, to the utter Deſtruction of the Patient; as too often hath happen'd where this good Precaution has been neglected: And therefore, by way of Concluſion, I ſhou'd adviſe it always to be obſerv'd.

CHAP. XII.

Of Agglutinative Remedies.

IN the foregoing Chapter having treated of all the neceſſary Auxiliaries us'd in reſtraining the moſt violent Hæmorrhages flowing from large and deep Wounds of the great Veſſels, or arterial Canals, where the weaker and milder Tribe (although

(although excellently well ſuited for ſimple Wounds attended with no conſiderable bleeding) are found inſufficient to ſuppreſs them; I ſhall now endeavour to explain the Nature, Quality, and Uſe, of theſe latter, which the aforeſaid great Effuſion reſiſted the Efficacy of: For, as *Fuſius* obſerves, it is not every ſmall Flux of Blood that merits the Appellation of an Hæmorrhage; but only ſuch Fluxes as are vehement and profuſe: In which Caſes, all the Aſſiſtance of Art is requir'd, according to the Advice of *Hippocrates*, who ſaith, that a great Diſeaſe muſt have a great Remedy; and where Medicines fail, the Knife and Cautery muſt take Place. But as theſe, and eſpecially the latter, cauſe a Loſs of Subſtance more or leſs in the Part than is meet, according to the Degree of Uſtion, fruſtrating thereby the Intention of Agglutination, I therefore have referr'd ſome of the Materials (that ſhou'd have been treated of amongſt the preceding Blood-ſtenchers) to this Place, as a Subject however common to both Intentions or Deſigns; yet notwithſtanding more properly to be treated of here, as we cou'd ſcarce ever rightly ſucceed in the Work of healing the Wound by Symphyſis, without the Help of one or other of theſe neceſſary Inſtruments; it being almoſt impoſſible to retain the divided Parts in a ſtrict Union, or mutual Contact with each other, unleſs they be firſt brought near together, and cloſ'd gently by the Fingers, and afterward ſtrengthened and confirmed by the Suture or Bandage, and ſometimes both: And this is the firſt Step that is taken in the Cure of ſimple and recent

cent Wounds, where there is no Contuſion, Fracture, Loſs of Subſtance, Tumour, Hæmorrhage, or other Accident, that may forbid it; then (ſaith *Corn. Celſus, Lib. 5. cap. 26.*) *Longè eſt optimum glutinari vulnus.* And this is confirm'd farther by the Teſtimony of *Galen*, 3. *Meth.* 4. ſaying, where there is a *ſolutio continui*, or Diviſion, made in the Parts by a ſharp Inſtrument, Agglutination is only requir'd.

To accompliſh which End, there's a twofold Manner of Cure appointed by the recited illuſtrious Authors; the one medicinal, the other manual or inſtrumental; and although the latter doth uſually take Place of the former, as firſt occurring in Practice, yet (without any Breach of the Rules of Art) I ſhall in purſuance of the former Method, be oblig'd to poſtpone them, and begin with the medicinal Kind firſt: Whereof there is a great Variety, not only in the Simples and Compoſitions therefrom prepar'd, but alſo in their Natures and Qualities: For if we ſtrictly examine the Medicaments compoſing this Claſs, we ſhall find many of 'em going under different Denominations, *viz.* Aſtringents, Emplaſticks, Sarcoticks, and Epuloticks; and the Reaſon of it ſeems to ariſe from the different Subjects and Parts they are applied to: For although the Ancients rank'd them under the ſecond Degree of Dryneſs conjoin'd with a like Aſtriction, and therefore placed them in a Medium between the incarnative and cicatrizing Remedies, (as being ſtronger than the former, and weaker than the latter) yet that cannot certainly be determin'd in point of Quality,

lity, on account of the various Temperature of Bodies, *&c.* (whereto they are exactly to be accommodated.) For as the learned *Heurnius* declares, Medicaments either retain, loſe, or change their Faculty, according to the different Nature of the Perſon they act upon; which *Hollerius* being ſenſible of, affirm'd, that Agglutinatives will become either ſarcotick or epulotick, by augmenting or diminiſhing their adſtringing Quality; and this is referable to the Variety of human Temperaments, which, together with other Circumſtances concurring, affords an ample Latitude in the Choice of Medicines. Whereto *Galen* paid ſo great Regard, that we frequently find him inculcating this Precept of proportioning the Strength and Quality of the Application to that of the Diſeaſe and Conſtitution of the Patient; condemning the Methodiſts for their Ignorance and Neglect in this Point: Saying, they knew not that humid Natures muſt have humid Medicines, and dry Temperaments drier ones; as the like might be ſaid of hot Conſtitutions, *&c.* which are comforted and preſerv'd by their like, but deſtroy'd by their Contraries. For as in the Cure of a Diſtemper *Contraria contrariorum eſſe Remedia*, is a true Axiom, yet here *Similia ſimilibus conſervantur*, ſtands in Force (in reſpect of the Part affected) as is evident from *Meth.* 8. *cap.* 9. and 5 & 6 *De tuenda Valetudine*, and ſeveral other Places of the ſame Author; who commands the natural Craſis of the Subject to be preſerv'd, and the preternatural or Intemperies to be remov'd. " For (ſaith he) in thoſe which are natural, and

" thoſe

" thoſe which are preternatural, there's a contra-
" ry Indication, the former indicating its like, and
" the latter contrariwiſe." Hence he ſubjoins, that whoſoever will rightly cure, muſt have a due Regard to all theſe Things which the Empiricks and Methodiſts neglect, ſuppoſing that one and the ſame Medicament will agree with every Part, and every Perſon. But this is an extreme Madneſs, as the ſaid illuſtrious Perſon avouches, ſhewing that there is a proper Curation for every Man; ſuppoſing there were fifteen Differences in the Temperaments of Bodies, ſo many Differences in the Nature and Quality of Medicines, is neceſſary to be underſtood: But how difficult this Knowledge is to attain, may be gather'd from what follows, where we are inform'd, that they only are capable of it, who are duly exercis'd in conſidering the premis'd Circumſtances, (*viz.* a juſt Knowledge of Temperaments, *&c.*) wherefore *Heurnius* gives us this prudent Counſel, ſaying, *Quantum fieri poſſit, aſſequi ſtudebimus ægri naturam communem & peculiarem, quo ad genuinam temperiem fracta corporis revehi poſſit.* The Reaſon and Uſefulneſs whereof, may be met with in his *Meth. ad Praxin. Lib.* 3. *cap.* 14, *&c.*

From all which, I conclude, that ſeeing the Conſtitutions of human Bodies and the Parts thereof are ſo widely different in Nature and Quality, as to admit of no Compariſon; it muſt neceſſarily follow, that the Remedies appropriated for their Uſe, ſhall vary accordingly; and for that Reaſon the agglutinative Claſs can't certainly be confin'd to a ſtated Degree of Quality, any more than

than the reſt of the foregoing preſcrib'd for other Uſes. " And therefore 'tis no Wonder (ſaith *Jo. Prævotius)* " that theſe Medicines are fetch'd " from different Claſſes, and that we ſhou'd meet " with ſome of them partaking of a cold, dry, " and aſtringing Quality: And others, on the " other Hand, of a warm, moiſt, and emplaſtick " Faculty."

Of the former Kind are Bole Armoniac, Dragon's Blood, ſealed Lemnian Earth, dried Sponge, rough Wine, Sumach Galls, Bloodſtone, Acacia, Hypocyſtis, Plantain, Knotgraſs, Shepherd's Purſe, Horſetail, Mouſe-ear, Balauſtians, Tormentil, and ſundry others; which by an aſtringing and drying Faculty, have Power to abſume and dry up the ſuperfluous Seroſities, or ichorous Humour, that might probably diſtil from the inciſed Capillaries into the Bottom of the Wound, and there putrifying, (through want of a due Diſcharge) occaſion Pain, Fluxion, Inflammation, and Tumour, to the endangering of an Apoſtemation or ſinuous Ulcer in the Part affected: Which Accidents, the cold, repelling, and adſtringing Faculty of ſeveral of the recited Simples, doth greatly withſtand, when adhibited in a ſuitable and convenient Form, wherein the Artiſt's Judgment will beſt direct him, whether that of a liquid or ſolid Conſiſtence, (ſuch as a vulnerary Water, Powder, Balſam, Cerote, *&c.)* will be moſt eligible for the preſent Intention.

Of the ſecond Sort, or warmer Tribe, which acts by a contrary Virtue and Quality, are ſeveral of the emplaſtick and balſamick Kind. The moſt eminent

eminent and ſerviceable are theſe following, *viz.* Alloes, Myrrh, Maſtick, Frankincenſe, Mummy, Roſin, Starch, Gum Dragon, Balſam of *Tolu*, *Peru*, Gum Elemi, *&c.* with their Compounds; the *Liniment. Arcæi*, *Balſ. Hyſpan. Samaritan. Hyperic. Veſalii*, *Fallopii*, *Lucatell. Empl. è Gum. Elem. Andr. Cruc. Barbarum*, *M. Cerat. ex Pell. Ariet.* and the like viſcid emplaſtick Subſtances, partaking of a glutinous Contexture, and ſoft balſamick Nature; whereby they adhere more firmly to the Parts brought to mutual Contact, and by that Means not only defend the ſubjacent Bodies from the Annoyance of the external Air, but alſo qualify the Acrimony of the excreted Humour, rendering it of a better Conſiſtence, and conſequently leſs prone to Fluxion; whilſt the warming Quality of theſe Medicaments being conformable to the natural Heat of the fleſhy and ſoft Parts, preſerves the due Temperature thereof, a Qualification very requiſite in this Intention, which may be look'd upon as one of the chief Promoters and Aſſiſters of Nature (deduc'd from external Cauſes) in the Work of Agglutination, wherein Medicines have little farther to do than to keep the adjacent Fleſh in its due Craſis or Temper, and preſerve the Wound from the Injuries of extraneous Bodies; the whole Streſs of Cure lying upon the manual or inſtrumental Helps falling under this ſecond Diviſion, of which the Suture and Bandage is the principal. The firſt and moſt commonly us'd in Practice, is call'd by the Ancients the agglutinative or uniting Suture, whereof

whereof there are two Sorts; the one nam'd the true Suture, the other a ſpurious one.

The former, which is perform'd with the Thread and Needles, *Glandorpius* diſtinguiſheth from the latter by the Term of the actual Suture; calling the dry Stitch the potential. To put the former or true Suture into Practice, the Surgeon having prepar'd all the Apparatus ready for the Work, muſt firſt cleanſe the Wound of all foreign Bodies of what Sort ſoever, (whether ſolid or liquid) that may hinder its reuniting; this being done, the divided Lips are gently and evenly to be brought together, ſo that they may be contiguous in their whole Extent, and remain in that Poſition by the Aſſiſtance of a Servant's Hand; whilſt the Operator paſſeth a three-ſquare pointed Needle, arm'd with a wax'd Thread, or Silk, through the Middle of the Wound, beginning at ſome reaſonable Diſtance (as that of three or four Lines) from the Margin of it, piercing the ſaid Lips from without inward, and ſo proceeding to the oppoſite Side, from within, outwards, holding a ſtitching Quill, or a Finger of the Left Hand, (which is more commodious) againſt the lower Lip, in order to keep it ſteddy and unmoveable, while the Needle is paſſing through it: Then having drawn the Thread to a ſufficient Length, turn it twice over, (for better Security) and draw the ſaid Margins gently together, ſecuring them by a faſt Knot tied thereon; and laſtly, cut off the Thread.

If more Stitches are requir'd, as one on each Side, they are to be taken at a due Diſtance from the

the former, proceeding in like Manner till the whole be accompliſh'd, obſerving to leave the ſame Space open (*viz.* about an Inch) at each End, for the more eaſy Diſcharge of the Matter; whereby Pain, Tumour, and Inflammation, may be prevented.

The latter, or dry Stitch, ſo call'd by reaſon no chirurgical Inſtrument is made uſe of to perform it, and therefore is attended with no Loſs of Blood, whence it took its Denomination; is us'd chiefly in Wounds of the Face, and other Parts expos'd to open View, where a Deformity (ariſing from the Punctures made with the Needles) wou'd be avoided: And this likewiſe admits of a Subdiviſion, into two Kinds; the one where the Surgeon uſeth two Plaiſters with Ligatures, or Threads; and the other where one Plaiſter is alone made uſe of, without them. The former, and more ancient Method, is thus perform'd: Having made choice of a ſuitable Piece of new Linnen Cloth, the ſame is to be cut into two Pieces, of a proportionable Size and Figure, to the Length and Depth of the Wound (for they muſt exactly correſpond to the Magnitude of the Affect, be it great or ſmall, wherein the Depth is moſt principally to be regarded;) the ſaid Pieces of Cloth muſt have a Selvage on each Side, which muſt be next to the Wound, wherein as many Digitations are to be cut, as you intend there ſhall be Stitches, at or about the ſame Diſtance from each other, as propos'd in the foregoing interſected Suture (made with the Needle;) then the ſaid Pieces are each to be ſpread with

ſome adheſive Emplaiſter or Mixture, upon the other End of the Cloth that is oppoſite to the ſaid Indentings or Gaſhes, leaving them untouch'd with the Medicine, for the more eaſy Paſſage of the Inſtrument; which being done, theſe Plaiſters are to be applied one on each Side of the Wound, about a Finger's Breadth Diſtance from its Margins, and being ſuffer'd to reſt thereon until they adhere pretty faſt to the Part, the ſaid Digitations (exactly agreeing one with another in Poſition) are then to be laid hold of, and drawn together by a Needle and Thread paſs'd through them, whereby the Edges of the Wound will in like manner approach each other without Pain; and laſtly, reunite, by ſecuring the Ends of the Thread, and applying ſome agglutinative Balſam requiſite for the Intention.

The ſecond Way of making the dry Suture, is effected by Means of one ſingle Plaiſter, proportion'd to the Bigneſs of the Wound (as now lately obſerv'd;) this Plaiſter muſt likewiſe be very adheſive and ſticking, and as large as both the two former, in the Middle whereof a ſmall Hole may be ſnipt, for the more commodious Application of the Dreſſings: Then one End of it is to be applied to one Side of the Wound, preſſing it hard with the Hand, until it ſtick pretty faſt to the ſubjacent Fleſh, which being perceiv'd, the divided Lips are to be reunited with the Fingers, as in the foregoing Caſe, whilſt the Surgeon brings over the other End of the Plaiſter to the oppoſite Part, and there holding it faſt until it be in like manner ſecur'd by Adheſion, through which

which ſaid Foramen your agglutinative Medicament is to be adhibited upon a ſmall Pledgit, covering it over with a ſuitable Compreſs, or piece of the ſame Plaiſter; finiſhing the Dreſſing with the uſual Bandage: Whereof there are ſeveral Sorts, going under different Denominations, to be met with in the Volumes of the Antients. Yet for this Work the retentive and incarnative are moſt in uſe; the former ſerving only to retain the Dreſſings in due Order, as the Term imports, is uſed chiefly in caſe of Pain, made after the common Manner with a ſingle-headed Roller, and therefore needs no farther Explanation.

The latter and more uſeful, call'd the agglutinative or uniting Bandage, is made with the double-headed Roller, whoſe Middle is to be applied to the contrary or oppoſite ſide of the Wound, bringing the two Heads pretty tight over the Affect itſelf, in ſuch a manner, that one of the Ends may go obliquely, or rather croſſing the other, making three or four Circumvolutions upon the Wound, and then afterward aſcending with one of the Heads (or Ends) toward the upper Part, and gradually deſcending with the other, to the lower Extremity, at whoſe Terminations they are to be ſecurely faſten'd by Pins or Needles, as the Circumſtance ſhall direct.

And here it may not be improper to ſubjoin ſome uſeful Cautions and neceſſary Remarks. The medicinal Claſs I ſhall paſs over, with only obſerving, that the more drying and aſtringing Tribe are never to be uſed in tender Habits and ſoft Parts; for as they are deſign'd not to come up

with the Epuloticks in degrees of Quality, they therefore in ſuch Subjects (by over acting their Parts) would conſume not only the more ſuperfluous Humours, but alſo the *Succus nutritius*, or proper Nouriſhment of the Part; whereby it being defrauded of its due Aliment, the Fleſh would conſequently become flaccid and fall away, proving rather a Cathartick than an Agglutinative: Whereas, *e contra*, if the milder and more humid Applications were adhibited to a hard, dry, denſe Body, or to a Part endued with the like Temperament, the Medicament would probably act as a Colliquative or Putrefactive, or at beſt give way to a fungous and luxuriant Subſtance to ariſe therein: Therefore ſoft Bodies and Parts muſt have the milder Remedies, and the contrary Subjects the more ſtrong.

A like Caution occurs in the Uſe of Powders, when applied ſimply for this Intention, which forbids any hard rough Subſtance entring the Cavity of the Wound; and for that Cauſe, they ought to be moſt finely pulverized, and even then, the divided Lips are firſt to be brought cloſe together, and defended with a fine thin Pledgit of Lint wrung out of Red Wine or ſome other aſtringing Liquor, before the ſame can ſafely be adhibited; leſt otherwiſe ſome Particles thereof might chance to fall into the *Solutio continui*, and there produce Pain, and its concomitant Attendants, Fluxion, Tumour, and Inflammation. For it is obſervable, that Nature cannot admit of, neither will ſuffer any extraneous Body, to lodge within the Cavity of a Part (no not

ſo

ſo much as an Hair, or the grumous Blood, that is more familiar to it) while ſhe is buſied about this Intention.

Yet in the Uſe of Balſams, whoſe conſtituent Particles are ſoft, warm, and gentle, that Precaution is not ſo ſtrictly to be regarded; for when the Sutures are made (or the Lips by any Method cloſed) we ſcruple not to ſmear over the Face of the Wound with the feathery End of a Quill moiſten'd in theſe Medicaments; and even ſuffer ſome Portion of them gently to diſtill thereinto, without any Danger of accruing Accidents; taking only due Care, by ſoft Pledgits, Compreſſes and Deligation, to prevent the Intromiſſion of the ambient Air, whoſe nitrous Particles are a known Enemy in theſe Caſes; which is all that I have to obſerve at preſent in relation to Medicine.

As to Sutures and Bandages, the former take place in all tranſverſal and large deep Wounds, and the latter in the longitudinal and ſuperficial ones; for where the *Solutio continui* runs parallel with the right Fibres of the Muſcles (or is made directly along the Member) the ſtitching may very well be omitted: The agglutinative Bandage afore deſcribed, being fully ſufficient to retain the Lips of the Wound together until Agglutination be perfected according to *Galen* 3. *Meth.* 10. For which Deſign, there are ſome Practitioners of good Credit and Experience, who would have the double-headed Roller perforated or ſlit in the Middle, and through the Orifices one of the Heads is to be paſſed exactly over the Wound it-

ſelf; by which Contrivance the Bandage ſits much eaſier and tighter upon the Part affected, and likewiſe retains the reunited Lips more equally and firm in mutual Contact: But where the Wound is made oblique or tranſverſe, ſo that the muſcular Fibres thereby become divided (as generally happens in all large Wounds whatever, made o'erthwart the Member) the Fleſh thereupon immediately retracts or draws back toward the ſound Parts, leaving the Lips widely gaping and diſtant from one another; whence, as the ſaid Author in the recited Place obſerves, theſe require more diligently to be conjoined, not only with the Roller, but alſo with the Suture, *&c.* which is to to be made more profound or ſuperficial, according as the Magnitude of the Affect ſhall direct; for great Wounds, and eſpecially deep ones, muſt have deep Stitches, comprehending not only the Skin, but alſo a Portion of the muſculous Fleſh, leſt by leaving a Cavity or Hollowneſs in the Bottom, a Collection of Matter might be form'd there, to the endangering of a future Apoſtemation; whereas on the other hand, if the ſame is not very deep, the Sutures in like manner may be conformable, and circumſcribed within the Bounds of the Cutis. As to their Number it cannot certainly be determined, ſeeing it depends upon the Greatneſs or Length of the Wound. *Guido* ſaith there muſt be a Finger's breadth diſtance betwixt every Suture, and moſt Practitioners follow him in this Matter; ſo that for every Inch or Finger's breadth, except the firſt (which is not included, for no Wound, in what Part ſoever

ever inflicted, excepting the arterial Canals and large Veſſels, of one Inch Extent, requires this Operation) there muſt be a Suture; as for Example, ſuppoſe a Solution of Continuity was made five Inches long, acroſs any Member of the Body, there muſt (by this Account) be four Stitches; or if four Inches, then three Punctures will be ſufficient; and ſo on of the reſt: Always obſerving to leave a Finger's breadth Vacancy at each End (*i. e.* between the outward Stitches and the Extremities of the Wound) as before directed, for the Conveyance and Diſcharge of the Matter in caſe of a ſucceeding Suppuration.

For the more ready and eaſy Performance of this Work, it is very requiſite, that the young Artiſt be provided with a competent Stock of ſtrait and crooked Needles; the former for ſuperficial Wounds, and the latter for the more deep: They muſt be long, ſmall, and well poliſhed, having a three-ſquare Point (which cuts on all Sides as it paſſeth along, and enters the Fleſh with leſs Pain and Trouble;) in the Eye thereof muſt be a Groove or Channel for the Silk or Thread to lie hid in, whereby it follows the Inſtrument without any Stop or Hindrance to the Proceeding; eſpecially when the ſaid Thread is fine, ſmooth, and even, drawn through a piece of white Wax or ſome proper Plaiſter, in order to render it more eaſy to the Part, and leſs ſubject to cut through the Lips of the Wound before its due Time; wherein there is the ſame Uncertainty and Variation in relation to the Number of Days, as in that of the foregoing Sutures, by reaſon it

depends upon ſo many different Circumſtances, as the Temperature of the Air, Seaſon of the Year, Conſtitution of the Patient, Nature of the Part, Magnitude of the Affect, and ſundry others that may alter the ſpace of Time appointed for its Accompliſhment. Hence we ſee that Wounds agglutinate much ſooner in temperate dry Weather and Habits of a like Nature and Quality, than in the rainy and colder Seaſons, and Subjects of a humid Diſpoſition: Whereto *Hippocrates* ſeems to allude, when he informs us, that Health borders upon Dryneſs, but not upon Humidity. Therefore, ſaith *Guido*, the Time of drawing out the Stitches is when they have fully performed the deſired End, which in ſome Caſes will take up ſeven or eight Days, whereas three or four in others will be found fully ſufficient.

Laſtly, before we make the Suture, theſe following Conſiderations ought diligently to be attended to: 1*ſt*, The Wound is to be duly cleanſed of all extraneous Bodies (as from the Authority of *Meth.* 3. *Cap.* 4. we have lately adviſed.) 2*dly*, The Intemperies is to be removed according to the Decree of *Galen*, who expreſsly chargeth, that the Inflammation and other Accidents ſhall firſt be taken away before the Agglutination be attempted. 3*dly*, Contuſed Wounds cannot admit of healing by Symphyſis, ſeeing they are, by the Command of *Hippocrates*, to be brought to Suppuration. 4*thly*, All venomous Wounds, or thoſe inflicted by enraged Animals, are not to be agglutinated by Suture, by reaſon of a latent Malignity reſiding therein. 5*thly*, The nervous

Parts

Parts will hardly bear this Treatment, on Account of the exquiſite Perception wherewith they are endow'd; whence Inflammation, Fever, Spaſms, and continual Dolour, if not worſe Accidents, are frequently the attending Symptoms of the leaſt Puncture or Violation. *6thly*, All Hæmorrhages reſiſt this Method of cloſing the upper Orifice before the bleeding Veſſel be ſecured. *7thly*, Where there is any remarkable loſs of Subſtance, the Lips cannot be united by ſtitching (ſome particular Caſes, as in the Hare-Lip, *&c.* only excepted.) *8thly*, In cacochymick and plethorick Bodies, the Work of Agglutination ſeldom ſucceeds proſperouſly, one Action or other commonly fruſtrating the Intention. But when all theſe are abſent, the Suture, Bandage (or both) are of the utmoſt Service, as *Galen* hath well declared in the Cloſe of the laſt Chapter in *Meth.* 3. after this Manner, ſaying, that in longitudinal Wounds (or thoſe made lengthway of the Muſcles) if you bind them with the double-headed Roller, it will be ſufficient, without the Aſſiſtance of Suture or other Inſtrument: But in thoſe that are very deep and long (and withal tranſverſe) as they are great two ways, a two-fold Indication ariſeth; wherefore you ſhall both take deep Stitches, and likewiſe roll, with the double-headed Bandage afore deſcribed: Whereto, in the Uſe of Stitches, I ſhall ſubjoin, this concluſive Precept, *viz.* that where there is any Angles in the Wound, the firſt Stitch is generally taken in thoſe Places; but otherwiſe the Middle

Middle of the Wound always claims the firſt Suture in Practice.

CHAP. XIII.

Of Catagmatick *and* Diſquammatory Medicines.

THE Diſeaſes ariſing from a Solution of Continuity made in the fleſhy and ſoft Parts being duly ſatisfied by the premiſed Intentions; we come now to ſpeak of thoſe that happen to the Bones; whereof the Fracture and Cariosity is the moſt common and conſiderable. But as it is our Deſign only to treat of thoſe Accidents, ſo far as they relate to Medicine, we ſhall paſs over the Bandages, and the reſt of the Apparatus uſed in ſimple Fractures, and confine our Diſcourſe particularly to thoſe Caſes, wherein theſe Remedies may be applied to moſt Advantage. The firſt of which, as it looks properly adapted for the Uſe of broken Bones, we call a catagmatick Medicine, as the Etymology of the Word ſeems partly to imply. But as the Term is ſomewhat of an ambiguous Signification, it may likewiſe be converted to ths diſquammatory Claſs: For which Deſign, we find ſeveral of theſe Medicaments very frequently preſcribed by Phyſicians; and particularly *Hollerius* plainly declares, that they are ſerviceable for ſcaling a putrid and carious Bone, ranking them at the ſame time at the Head of the dryer ſarcotick Medicaments, ſuch as are the Roots of

of Gentian, Ariſtolochia, Orrice, and ſome others of the capital Powders that go under the ſaid Denomination. But as their Uſefulneſs only extends to the naked Bones, where they may commodiouſly be come at by ſuch like Remedies; I ſhall defer any further Deſcription of them, until I have taken notice of thoſe that more particularly regard the fractur'd Part, wherein the Generation of a Callus is the principal Thing to be conſidered; for the Promotion whereof various Helps as well internally as externally are appointed: Though after a due Reduction of the two fractured Extremities, and ſuitable Repoſition, *&c.* Eaſe and Repoſe may be ſaid to be the beſt Remedy, whereto a due Regimen in the Nonnaturals, and chiefly in that of Diet, doth greatly concur; as *Galen* teacheth, *6 Meth. 5.* ſaying, that the Body is to be nouriſhed with Aliments that afford good Juice, and ſuch as partake of viſcous Parts; for thereof, ſaith he, the Callus is chiefly formed. Hence came the Extremities of Animals, and the like gelatinous Subſtances to be ſo much applauded by ſome Practitioners for this Deſign, although the ſaid Authority left it under a certain Reſtriction, when he affirmeth, that neither too groſs nor too moiſt a Diet are ſerviceable for that Work; a Mediocrity between each Extreme being alway preferable, not only in the Aliment, but alſo in the Choice of external Medicaments themſelves; teſtifying, upon his own great Experience and Authority, that an Exceſs of Dryneſs or Humidity in the topical Applications, is equally detrimental in the Generation of a Callus: Wherefore he adviſeth

adviſeth us to make uſe of thoſe Medicaments that have an emplaſtick Subſtance, conjoyned with a moderate Heat; for theſe, by virtue of their Quality and Conſiſtence, ſeem the moſt rational and proper; the former correſponding with the natural Temperament of the Part, preſerves it from Spaſms, convulſive Twitchings, and other Accidents, whereto in this State it is very prone and obnoxious; whilſt the other (*i. e.* the Emplaſtick Faculty) retains the nutritious Juices within their due Bounds, and prevents their Eſcape from off the Margins or Edges of the fractur'd Bone, whereto they are to coaleſce and form a callous Ledge or Border, that, as *Galen* expreſſeth it, may be, as it were, a ſafe Band to unite and keep together the Ends of the broken Bones, without compreſſing the Muſcles. For that Callus which is too great and luxuriant, always proves troubleſom and painful to the Patient, by continually diſtending the ſuperincumbent Membrane; as contrariwiſe, that which is too little is wholly unſerviceable, being not of ſufficient Strength to retain the two Ends of the broken Bone in their due Place: Therefore we are to correct and repair thoſe Errors or Defaults of Nature, by the Aſſiſtance of ſuitable Remedies. What theſe are, that increaſe or diminiſh this natural Gluten or Cement, the ſame Author very plainly ſheweth, by obſerving that moderate calefying emplaſtick Medicaments do generate and promote the Increaſe of it; but thoſe which have a digeſtive Faculty, diminiſh the Growth of it, by diſſolving and as it were melting down the nutritious Humours

mours of the Bone, that ſhould coagulate and form this callous Body: Hence, with this monitory Precept, he concludes, that if we would rightly proceed, we muſt uſe thoſe Medicines that are adhibited to green Wounds; which ſeeing they moderately dry, they by that Means cauſe the Callus in like manner moderately to grow and concrete about the Edges of the fractur'd Part. Thus far this incomparable Writer dictates the true Method of treating a fractur'd Member; and at the Cloſe of this Doctrine tacitly intimates the great Affinity there is betwixt the Diſeaſes of the Bones, and thoſe of the Fleſh; and that the Curation of both (excepting what relates to the Degree of Hardneſs and Solidity) is much the ſame: For when a *ſolutio continui* is made in the fleſhy and ſoft Parts, the Lips thereof preſently recede ſo far from one another, that it is neceſſary, in order for their uniting, to bring them cloſe together, and there retain them by Suture or Bandage. The ſame happens to the Bones when fractur'd, (which *Guido* calls a *ſolutio continui* of thoſe ſolid Parts) their two Extremities are drawn from one another, and therefore cannot be conſolidated until the Operator hath rightly replac'd them, and ſecur'd them in that Poſition by ſuitable Deligation.

The Remedies likewiſe appointed for one Intention, will admirably well anſwer that of the other; for the agglutinative Claſs moſtly conſiſts of emplaſtick and drying Medicines; and the like, by the Authority of the Ancients, are appointed to be us'd here: Such as Gum Arabick, Maſtick, Myrrh,

Myrrh, Alloes, Frankincenſe, Labdanum, Sarcocolla, Pitch, Roſin, and ſeveral others of the gummy and reſinous Kind, to be met with in the foregoing Chapter; yet as theſe, by reaſon of their heating Quality, may be ſuppos'd to do Harm, 'tis uſual to add ſome drying and aſtringing Ingredients to 'em, in order to contemperate their Heat, that otherwiſe might render them of a digeſtive or diſcuſſive Faculty, as ſometimes hath been obſerv'd from an undue or too liberal Uſe of the hotter gummy Plaiſters. Therefore the Lemnian Earth, Bole Armoniac, Dragon's Blood, Litharge, Ceruſs, Galls, Pomgranate Bark and Flowers, Horſetail, Comfrey, and the like cooling and drying Remedies, do uſually enter along with the other into the moſt fam'd officinal Compounds that merit a Place in this Intention; and 'tis to be obſerv'd, that thoſe are the moſt effectual and approv'd Compoſitions, that take in a due Quantity of theſe latter. Hence came the *Empl. ad Herniam. de Minio Vigonis*, and even the *Diachyl.* and *De Minio Simpl.* to be preferable to the *Stictic. Paracelſ.* and *Oxycroc.* that are loaded with the Gums. The emplaſtick and adheſive Faculty of ſuch Medicaments (by retaining and preſerving the natural Heat of the Part) being ſufficient for this Work, without any other Addition or Increaſe of Quality. And this doubtleſs was the Opinion of the Prince of Phyſick, when he ſaid that emplaſtick Medicaments (ſerving in this Uſe) ſhould be endu'd with a moderate Heat.

But yet, upon account of the different Temperaments of Bodies, Climates, and Seaſons of the

the Year, (whereto all experienc'd Practitioners pay a great Regard in the Choice of their topical Applications) the warmer Emplaſticks may ſometimes be us'd with equal Succeſs as in the colder Habits and Winter Seaſon; whereas on the other Hand the contrary Conſtitution of the Air and Subject, indicates a Remedy of a contrary or colder Quality: Hence come the warm gummy Plaiſters to be ſo ſerviceable in the former Circumſtances, and ſo very prejudicial in the latter, which can only diſpenſe with the colder Tribe, (ſuch as Vinegar, Oxycrate, Whites of Eggs, Bole Armoniac, and the like repelling Subjects) that by reſiſting the Inflammation and other Accidents, affords Nature the Opportunity of tranſmitting the cementing Juices to the affected Member.

The Time of the perfect Formation of the Callus depending upon the Age, Sex, Habit, Seaſon of the Year, Nature of the Part, and ſundry other different Circumſtances, renders it very difficult to be aſſign'd; for in ſome it happens ſooner, in others later: The Bones of Women, Children, and thoſe of a good Habit of Body, will much ſooner coaleſce, or grow together, than in an adult or aged Perſon; and more eſpecially if the ſame partake of a ſcorbutick or venereal Taint: For in ſuch there either will ariſe no Callus at all, or at beſt a very ſlow and ſlender one. The mercurial Preparations that are us'd (together with the bad Craſis of the Fluids) in ſuch Caſes, wholly diſſolving and deſtroying the Nature, Quality, and Conſiſtence of the cementing Juices.

Juices. Therefore 'tis highly adviſeable, during the Confinement of a fractured Bone, to abſtain from the Uſe of thoſe Remedies, though at the ſame Time the Patient ſhould actually labour under the *Lues venerea* in a high Degree. The diſcuſſive Faculty of ſuch Medicaments being adverſe to the Nature of a Callus, muſt needs fruſtrate the Intention; as is evident from the notable Effects of Mercury, in breaking through the groſſeſt Coheſions of the Body; nay, even if externally applied, (in the Form of Unguents, Emplaiſters, *&c.*) it reſolves the very Nodes and Exoſtoſes of the Bones, and therefore cannot fail in acting the ſame Part upon the proper Juices thereof. A farther Inconveniency likewiſe attends the Uſe of Mercury, and that is a Diarrhœa; an Accident (whereto it is very prone, and) no leſs detrimental than if it paſs'd off by the ſalivary Glands in ſpitting; each of which, and as I may ſay, all other preternatural Evacuations in general, are highly prejudicial and repugnant to the Deſign in Hand; ſeeing that by ſuch Diſcharges the alimentary Humours are carried off, and the Part thereby defrauded of its proper Nouriſhment appointed by Nature for repairing the Breach of Unity.

Laſtly, an undue Motion of the Member infers no leſs Damage and Inconvenience; whence aroſe that uſual and true Saying, (taken Notice of by Practitioners) that Reſt is moſt highly neceſſary for reuniting the broken Bones. "Where-
"fore (ſaith Mr. *Le Clerc*) I cannot ſufficiently
"recommend it to the Care of young Surgeons
"and

" and Patients to keep the fractur'd Parts very " quiet and undisturb'd; for nothing so much " retards the knitting of the Bones, as Motion " (occasion'd either by the Patient or Surgeon) " in the Part affected. For we have often found (saith our Author) " that this Motion hath cau- " sed both Ends of the broken Bone to dry up " and become callous." To remedy which, while the Callosity is recent, the Extremities of the Bone are to be rubb'd pretty hard against one another, in order to wear away and destroy the Callus, and by that Means open the small Conduits of the bony Fibres, that the nutritive Juice may issue out, for the consolidating and glewing together of the fractur'd Extremities: But as this is a doubtful and somewhat dangerous Experiment, (that very few will comply with) it is only to be undertaken by those Persons whose Abilities are capable to resist or remove the formidable Train of Accidents that are liable to arise from the Attrition and Laceration of the sensible involving Membrane, whilst the two Ends of the Bone are treated in this rough Manner.

Lastly, the luxuriant or over-grown Callus, is the next Thing to be consider'd in the Cure of Fractures; but as its Deformity is its greatest Detriment, and the Cure thereof rather appertaining to a System of Surgery, than to this Place, (which obligeth us only to speak of those Medicines in a general Manner, that are here propos'd) I shall pass it over with remarking only that in the Beginning the same may be prevented first by making a strait and tight Bandage that may equally

compreſs the Ends of the Bones, and ſo hinder the Juices from diffuſing or ſpreading themſelves abroad in the neighbouring Parts. Secondly, by uſing a thin and ſpare Diet; as *Galen*, 6 *Meth.* 5. and other Places, hath appointed. Thirdly, and laſtly, by due Evacuation, according to the ſame Author, who informs us, that ſometimes it will be expedient to let Blood, and alſo to purge (if the Caſe require it) in order to draw off ſome of the ſuperfluous Humours.

As to topical Applications, the emollient and digeſtive Medicines are chiefly recommended for this Work; whereto it may be neceſſary to add a due Quantity of crude Mercury, on account of its great reſolving Faculty, whereby the Medicament will be render'd more efficacious: But this is only to be underſtood of the recent and new Callus, that is capable of Reſolution; for if it be ſuffer'd to reſt until it become old, hard, dry, and confirm'd, (partaking of a bony Nature) it lies not in the Power of Medicine to remove it, and for that Reaſon 'tis much better to refer it to Nature, under the Direction of a ſtrict Perſeverance in the aforeſaid Regimen preſcrib'd by *Galen*, than by fruitleſs and vain Attempts to expoſe the Patient to new Troubles and Dangers.

But enough of this. I ſhall now return to the other Kind of catagmatick Medicines taken Notice of in the Beginning of this Chapter, which I have referr'd to the diſquammatory Claſs, by reaſon of the great Affinity they bear to both Intentions: For it is manifeſt, that they will act either Part, according to the different Uſe they are applied

plied in. Hence we find them ſometimes preſcribed as a Diſquammatory to ſcale a corrupt and putrid Bone, where the Caries is ſuperficial, the Bone ſoft and tender, and the Patient young: At other Times they are introduc'd after the Exfoliation is over, (where the Affect is greater, and the Part and Subject of a contrary Temperature) in order to incarn and cicatrize the loſt Subſtance of the Bone into a Callus: Whence they may not improperly be term'd the Incarnatives, or rather Epuloticks of the Bone; inaſmuch as they perform the ſame Thing there, that is acted in the fleſhy and ſoft Parts: Upon which Conſideration a very good Judge in theſe Matters, did claſs theſe Remedies amongſt his Sarcoticks, knowing very well that the Intention of Cure was the ſame in both, however different in Nature and Subſtance they might appear, there being but one common curative Indication which is taken from the Affect, and that being an Ulcer, whether of the Bones or fleſhy Parts, requires Exſiccation: As appears from *Galen*, that glorious Head and great Reviver of the rational Sect; who in his incomparable Works, *De Arte Curat. ad Glauc. Meth. Medendi*, and ſeveral other Places, hath order'd this to be obſerv'd in what Part of the Body ſoever the Diſorder be ſituate; which Precept holds good in Practice amongſt the Learned unto this Day, who make uſe of the ſame Method of healing that was us'd of old, as being confirm'd both by Reaſon and Experience. For do we not ſee that Ulcers of the fleſhy Parts will firſt incarn, and afterward ſkin over, by the Help of drying Medicaments? And

in like manner, the Bones, when tainted with a Caries, (which I call an Ulcer of thoſe Parts) will firſt exfoliate, and then incarn and cicatrize by the ſame Method and Treatment. For inſtance, the Bones, when rugin'd with the Scalprum or Raſpatory, until the Blood appear, emit therefrom ſmall *Granulæ*, or Buds of new Fleſh, which increaſing and hardening by Degrees, form thereof a callous Subſtance: And this Proceedure may be look'd upon as a ſimple incarning and cicatrizing of the Bone. And, ſecondly, the Cranium, when perforated by the Trepan, admits of Conjunction with the incarned Subſtance of the ſubjacent Membrane, (like as the other Bones of the Body do with the Fleſh where there is no *Perioſteum* in the Place) which coaleſcing and hardening together, cloſes and ſhuts up the ſaid *Foramen* with a firm, denſe, and ſolid Covering; whereby is manifeſted the great Affinity and Similitude of Nature betwixt the Bones, Membranes, and other Parts; and that the only Difference conſiſts in the Degree of Hardneſs and Solidity, and conſequently both are capable of the ſame Affects and Method of Cure. As Profeſſor *Boerhaave* hath well remark'd, ſaying, "The Bones are ſubject to the ſame Diſeaſes with "the Fleſh and ſoft Parts; they are endu'd with "the ſame Kind of Veſſels, and moiſten'd with "the ſame Sort of Fluids; and thoſe Bones "whoſe Contexture is looſeſt, (or the Interſtices "thereof greateſt) come neareſt to the Structure "of the ſoft Parts: And for that Reaſon are "more apt to incur the ſame Diſeaſes." Which

is farther confirm'd, and more fully illuſtrated, by Monſieur *Arnaud*, who hath form'd a very juſt Parallel between the Diſeaſes of the Bones, and the fleſhy Parts; and in a very elegant Manner has prov'd the Truth of his Aſſertion by many Examples and Similitudes of Caſes; ſhewing that they are compos'd of the ſame Materials or Parts, as Fibres, Veins, Arteries, Tendons, Membranes, *&c.* and therefore equally ſubject to the ſame Maladies. "For let any Man (ſaith he) examine "if he pleaſeth, all the Diſeaſes which happen "to the fleſhy Parts, and he will find them hap-"pen to the Bones likewiſe, and that they are "to be treated in the ſame Manner." And that this too was the Opinion of the Ancients, we need go no farther to prove, than the 45th *Aphoriſm* of *Hippocrates*, *Sect.* 6. which ſaith, *Ulcera quæcunque annua ſunt, aut etiam diuturniora, os abſcedere eſt neceſſarium, & cicatrices cavas fieri*; plainly ſhewing hereby, that the Bones ſuffer with the Fleſh, and partake of the ſame Diſtempers, and conſequently muſt have a like Curation, as *Galen* in his Expoſition upon the foregoing Aphoriſm hath declar'd after this Manner, ſaying, *Quænam igitur eſt talium ſanatio Ulcerum? Non profectò alia quam ab ipſo ſcripta in Libro de Ulceribus, & à nobis in tertio de Arte curativa fuit demonſtrata. Nam ulcera omnia exſiccari oportet, præcipuè verò in quibus patitur os. Terminus autem eſt ſiccitatis, ut abſcedat pars ejus, quæ eſt vitiata.* What thoſe Remedies are, with the Virtue and Quality of 'em, appointed for the Cure of Ulcers in the recited Books, may partly be collected from the prece-

ding Diſcourſe, and alſo more fully from ſeveral of the premiſed Intentions peculiar to thoſe Affects; which by way of Summary may briefly be comprehended under that general Canon, or Rule of Art deliver'd by *Galen*, *Therapeut.* 4. *cap.* 5. which teacheth, that all Ulcers (excepting the contus'd, or otherwiſe preternaturally affected) require Deſiccation: For let any Man diligently peruſe all the Books of *Hippocrates* that he hath written of Ulcers, and he ſhall perfectly underſtand that there is one general curative Indication taken from the Affect; and that truly foraſmuch as it is an Ulcer, is moderate Dryneſs; whereto the *Arabian* Phyſicians, as *Rhaſis* and *Avicenna*, put in ſix Exceptions: But as thoſe Accidents that may ſeem to contra-indicate the Uſe hereof, have been ſufficiently diſcours'd of elſewhere, I ſhall take no farther Notice of them in this Place, it being ſufficient to conſider the Caſe in Hand, which is a Carioſity, or Ulcer of the Bone; and as that is a Part much harder and drier than the Fleſh, attended with a preternatural humid Diſtemperature, (ariſing from the corroſive Humour) a greater Degree of Dryneſs is neceſſary to abſorb and conſume the ſame, than in the ſofter Parts, as *Galen* in the Cloſe of his Comment upon the ſaid Aphoriſm hath particularly remark'd. Yet ſeeing there are ſeveral Circumſtances that may indicate the Choice of a ſtronger or milder Remedy, the preciſe Limits or Bounds (in reſpect of Quality) cou'd not exactly be defin'd; and therefore our Author left it partly to the Artiſt's Diſcretion, under the Latitude of drying the carious

rious Bone, even until the corrupted and dead Part ſeparate and ſcale off from the ſound: For which Intention there are various Medicaments of different Natures and Qualities, ſome being weaker, and others ſtronger; ſome alkaline, and others acid: The former conſiſting of a drying abſorbing Faculty, without any notable Acrimony conjoin'd, take Place in the more ſimple Affects, as where the Cariosity is ſuperficial, and of ſmall Extent, ariſing from ſome outward Cauſe, the Habit of the Body otherwiſe ſound, and of a ſoft and humid Diſpoſition; in which Caſes, the recited catagmatick Powders, prepar'd of the Roots of Birthwort, Gentian, Orrice, Myrrh, Frankincenſe, Alloes, Olibanum, Opoponax, and ſome others of a like Nature, will be found duly qualified to imbibe the ſuperfluous Humours, obtund their corroſive Quality, and dry the Surface of decay'd Bone into a harden'd Scale, that thro' want of due Moiſture, (its uſual Supply being hereby cut off) muſt neceſſarily exfoliate or caſt off, either in viſible Fragments, or inſenſibly moulder away in ſmaller Particles, as ſometimes is obſerv'd to happen in theſe ſuperficial Taints and Corruptions of the Bone. But, on the other Hand, where the Infection is greater and deeper, the Habit of the Body favouring or giving Riſe to the Diſtemper, and the Bone of a hard and ſolid Contexture, then the foregoing mild Remedies can be ſuppos'd of little Service; for the internal Dyſcraſis muſt firſt be alter'd and amended by proper Specificks, and the Affect it ſelf, if the Part will admit of it, rugin'd or ſcrap'd with the

Raſpatory; which Method, makes a much ſhorter Cut in the Cure of theſe Affects, than could ever be hop'd for from the moſt potent and ſtrongeſt Medicines: And for that Reaſon I ſhou'd alway adviſe it (where attemptable) as a Practice moſt ſafe and eaſy; neither carrying the Terror of the hot Iron, (ſo formidable to ſome Patients) nor the Pain of the acrid and corroſive Applications, that commonly are made uſe of in this Caſe; ſuch as the Powder of Euphorbium, and its Tincture; the Oil of Camphor, (prepared with an acid Spirit) Oil of Cloves, Guaiacum, Sulphur, Vitriol, and that noted painful Cauſtick the Butter of Antimony; all which require no leſs Circumſpection in their Management, than in the Application of the actual Cautery; this latter being freed from thoſe Inconveniencies of damaging the neighbouring Parts with its Heat, (by the Mediation of a proper *Canula)* whereto the others continually are obnoxious, in ſpite of all Precaution to reſtrain them within their due Bounds: And therefore the ſaid acid Diſquammatories are ſeldom call'd into Practice, except upon ſome particular Occaſion, where the former cannot conveniently be adhibited, and a ſpeedy Scaling of the Bone is requir'd, whoſe Effects are even as expeditious this Way, as the hot Inſtrument it ſelf, yet with this Difference, the one may be circumſcrib'd within appointed Bounds, but the other not, and farther in reſpect of their acid Quality, being look'd upon as detrimental and inimical to the Nature of the Bones; there is Danger of their introducing no leſs an Evil

than

than that which they are deſign'd to cure; upon which Account they are rejected by moſt Practitioners in all Affects of the Cranium, and thoſe near the Heads or Articulations of the Bones, where the Tendons, Membranes, *&c.* are concern'd, whence Pain, Inflammation, Fever, and perhaps worſe Accidents, might ariſe. Whereto that celebrated Artiſt *Fabric. ab Aquapend.* ſeems to have Regard, when very juſtly he prefers the Scalprum and Cautery upon all Occaſions, not excepting the fam'd Euphorbium, ſo much eſteem'd by *Fallopius* for its Efficacy in this Intention; in whoſe Uſe the adjacent Parts are to be well guarded from its vehement Heat and Acrimony, by applying ſmall Pledgets or Doſſils of dry Lint, round the interior and lower Part of the Ulcer, cloſe down upon the Bone, allowing a due Space for the Inſperſion of the Powder, which may be cover'd over with another Pledgit, filling up the Cavity with the reſt of the uſual Apparatus.

This Proceedure by Medicine being ſomewhat tedious both to the Patient and Surgeon, and requiring a conſiderable Space of Time for the Bone's Exfoliation, is much better perform'd by the Raſpatory, as lately advis'd, ſcraping the Bone therewith until we come at the ſound Part, which may be known by the Whiteneſs and Solidity thereof, and alſo from ſome Appearance of Blood following the Inſtrument, as *Cornelius Celſus*, *Lib.* 8. *cap.* 2. moſt excellently hath declar'd, after this Manner: *Os vitiatum* (ſays he) *ſcalpro radendum eſt, donec integrum id ſit quod relinquatur: Qui radit hoc, audacter imprimere ferramentum debet, ut*

& agat aliquid & maturius deſinat: Finis eſt, cum vel ad album os, vel ad ſolidum, ventum eſt (albo ſiniri ex nigritie vitium, ſoliditate quadam ex carie eſt manifeſtum) accedere etiam cruoris aliquid, ut ſupradictum, quæ integrioris nota eſt, deinde nitro bene pulverizato os eſt reſpergendum. But (with all due Submiſſion to his Authority) I ſhould rather prefer the catagmatick Powders at this Time, on account of their drying epulotick Faculty, which renders them no leſs ſerviceable in hardening the Surface of the cleans'd Bone into a Callus, than in performing that requiſite Intention in Ulcers of the fleſhy Parts, (when brought to a due Level) and even ſometimes that uſeful dreſſing the Tincture of Myrrh, may prove as efficacious as any of the other; for by virtue of the balſamick and reſinous Particles wherewith the Menſtruum is ſaturated, it hath Power to obtund and deaden the Activity of the corroſive acid Humours that perhaps might yet reſide within the Poroſities of the Bone, and likewiſe farther ſerve as a Varniſh or artificial Covering thereto, that may defend it from farther Corruption, whether ariſing from the Air, or otherwiſe: And this truly is the Reaſon of its becoming ſo often a good Diſquammatory of it ſelf in ſuperficial Affects; but where the Putrefaction is greater, and the Cariofity hath penetrated deep into the Subſtance of the Bone, the actual Cautery is the only and moſt effectual Remedy, being duly repeated for ſome Time until all the corroſive Humour be evaporated and conſum'd. For which Deſign, 'tis ſo adapt, that as Monſieur *Le Clere* obſerves, the ſharp and virulent

rulent Vapours that were the real Cauſe of the Putrefaction, may be ſeen to ariſe from thoſe Bones that afore appear'd to be white, dry, and porous; in the Uſe whereof, theſe following Cautions are neceſſary to be obſerv'd: 1. We are to take Care that the neighbouring ſound Parts be not ſcorch'd and burnt in the Operation; to prevent which, the cauterizing Iron is to be fitted with a ſuitable *Canula* of the ſame Metal, proportion'd to the Magnitude of the Ulcer; and for the greater Security, it may be fac'd or cover'd over on its Side with a Piece of oil'd Cloth, or ſome Rags wrung out of Water, or Oxycrate, renewing them as often as there ſhall be Occaſion to cool the ſaid Pipe or *Canula*, (commonly upon every Impreſſion of the glowing Iron) when there is no more than one to ſerve the Turn, although it were better to have three or four of theſe perforated Tubes, (wherethrough the Cautery is admitted to the Bone) ready arm'd at Hand, as *Fallopius* hath advis'd. 2. As the unctuous Humidity which in the Operation ſweats out of the burnt Bone, muſt neceſſarily become very hot and ſcalding, it ought diligently to be wip'd away with a Sponge or Linnen Rag, leſt it ſhould burn and ſcald the fleſhy Parts, no leſs than the actual Fire it ſelf. 3. As ſoon as the Part ceaſeth to emit any more Fumes or Vapours, the Cautery ought no longer to be repeated, as *Celſus* ſeems to intimate, when he ſaith, *Semel iterumve ſatis eſt admoto ferramento adurere.* For by the immoderate Uſe hereof, not only the fatty and unctuous Matter which he takes Notice of to be the

effi-

efficient Cauſe of the Corruption, would be conſum'd and dry'd up, but therewith alſo, the natural and proper Juices of the Bone, wherein the ſole expulſive Faculty reſides. 4. The nervous and tendinous Parts are as much as poſſible to be avoided, by reaſon of the great Pain and Anguiſh that uſually attends thoſe ſenſible Organs, when vellicated and offended by the actual or potential Cauteries; for which Cauſe, Practitioners muſt always be very cautious in applying theſe Remedies where they are ſuſpected to lie in the Way. 5. The Dreſſings requiſite after the ſaid Uſtion of the Bone, remain now only to be conſider'd; in the Choice of theſe, we find a great Variety amongſt Authors, according as their different Opinions led them. *Guido* us'd Oil of Roſes, malax'd with the White of Eggs, for the three firſt Days after the cauterizing of the Bone. *Fallopius* likewiſe, in Imitation of that Method, applied Butter, or Lard, after the Heat and Dolor was ſomewhat mitigated. And laſtly, *Ambr. Parey* commends his Oil of Whelps for the ſame Uſe: But he, like a wary and prudent Surgeon, ſoon recollecting himſelf, puts it under this Reſtriction, ſaying, that "Although this Oil is very fit for the Purpoſe, dropp'd twice or thrice "upon the Part, yet I would not have it us'd too "often, leſt by its oleaginous and thin humid "Subſtance, it ſhould at laſt violate and corrupt "the ſubjacent ſound Part: Foraſmuch as a Bone "is the moſt dry Part of the Body, unctuous "and humid Medicaments muſt needs therefore "be contrary to its Temper and Conſiſtence."

Which

Which Opinion being grounded upon Reaſon and Experience, and countenanced by the Authority of the Antients, was embraced long ago by many able and experienced Surgeons, who inſtead of humecting the Bone with lenient and oleous Applications, took the contrary Courſe of drying it, with the milder diſquammatory Powders ſtrew'd thereon, in order to haſten forward the Exfoliation: And others with the like View proceeded yet higher, venturing upon the ſtrongeſt diſquammatory Claſs, ſuch as the *Pulv. Euphorb. Ellibr. Nigr. Troch. Andron. Polyidæ*, &c. as was the Method of that great Artiſt *Hieron. Fabricius*, who alſo uſed the Juice of Leeks mix'd with Salt for this Deſign.

But as the Bone is burnt to a Coal or Cruſt, and all the Humidity thereof exhauſted in the fiery Operation, it truly ſignifies not much, whether the former or latter Method be follow'd in Practice, ſeeing the cauterized Bone in that State can receive neither much Benefit nor Damage from either of them; although I muſt own, my Opinion rather favours this latter, being unwilling to croſs that ancient Maxim of forbidding the Application of any unctuous or greaſy Dreſſing to the naked Bones. Therefore if any thing may be ſuppoſed to further Nature's Endeavour this way, it muſt be expected from the ſpiritous Remedies, ſuch as the recited Tincture of Myrrh, Aloes, Opoponax, *&c.* whoſe thin, ſubtil and drying Particles conjoin'd with thoſe of the Alcohol (their proper ſolvent Menſtruum) may have a Chance of permeating the carious Lamina, and commu-

communicating their Efficacy to the ſound Parts, where, by reſuſcitating the natural Heat, and conſequently increaſing the Growth of thoſe Caruncles or Buds of new Fleſh that (by *Celſus* and other eminent Perſons) are accounted the principal Cauſe of Diſquammation, the ſaid Medicaments bid faireſt towards promoting the Intention.

Finally, when the Scales begin to ſeparate and grow looſe, they are not violently and haſtily to be extracted, for that would expoſe the ſubjacent ſound Part to a new Alteration and Corruption; and therefore due Time muſt be allowed to Nature for their ſpontaneous Expulſion, even till the leaſt Fragment be come away; which otherwiſe would be prone to excite freſh Troubles in the Part affected, as *Hollerius* hath well remark'd (by way of Concluſion) in theſe following Words, *Quæ verò* (ſays he) *ſquammæ ante maturitatem rapiuntur ferro, aut vi revelluntur, fiſtulas ægre ſanabiles relinquunt; omnino ergo declinanda vis eſt; videndum quoque priuſquam impleas, ne quæ ſquamma vel fragmentum exceſſerit.*

CHAP. XIV.

Of Pyroticks.

UNDER this Pyrotick or fiery Claſs, are uſually comprehended all thoſe Remedies, that by virtue of an actual or potential Heat, have Power to rubify, fret, exulcerate, and de-

ſtroy the Texture of the Parts whereto they are applied, which they affect in a greater or leſſer degree of Action, according as their different Natures, Degrees of Quality, and other Contingencies ſhall diſpoſe them; in which there is a great Latitude, as is evident from their Effects, ſome acting more remiſsly, others more intenſely; whence they become diſtinguiſh'd by the different Denominations of Dropaces, Sinapiſms, Phænigms, Epiſpaſticks, Cathereticks, Eſcharoticks, and Cauſticks; all which may be reduced under three Degrees or Orders.

The firſt and mildeſt Sort, are thoſe whoſe Efficacy extends no farther than the Surface of the Cutis, either in rubifying or veſicating the ſame; a Practice much uſed by the ancient *Greek* Phyſicians, for the Cure of ſundry contumacious and inveterate Maladies, as appears from the valuable Monuments which have been left us by *Aretæus*, *Aetius*, *Paulus*, *Oribaſius*, *Alex. Trallianus*, and other illuſtrious Men of old, who in Apoplexies, Epilepſies, Lethargies, Palſies, Hemicrania, Cephalæa, Vertigo, and the like cephalick and nervous Diſorders, very frequently adhibited theſe Rubifiers and Exulcerants with great Succeſs (due Evacuation being premiſed.)

In the loweſt Claſs of all are placed the Dropaces, deſign'd to call down the ſtagnating or obſtructed Juices into an emaciated and pined Member, by means of a frequent and reiterated Vellication, uſed till the Part begin to grow red and tumify; a certain Sign the nutritious Humours were prolapſing into their proper *Tubuli*: From which

which good Effect, this ſimple Medicament, call'd by the *Latins Picatio*, and in our Idiom, a ſimple Pitch Plaiſter, hath, by the Authority of the Antients, obtain'd a Station in the Pyrotick Diviſion. Of theſe Medicines there are two Sorts, the one ſimple and the other compound; the former ſeems deſign'd chiefly for the more recent and ſimple Affects, where the Obſtruction is partial or only juſt in forming; the forcible Vellications and Shocks the nervous Fibres receive from this Treatment, may probably conduce to open their minute Conduits, and allow Space for the Reception of their proper Fluids; and thereby pave the way to the ſucceeding Sinapiſms appropriated for rooting out the Relicts of the Diſeaſe, by the Mediation of their more heating and ſtimulating Particles wherewith thoſe Medicaments do much abound. Yet to avoid the Trouble of preparing new Forms of Remedies, where one may be ſufficient, the compound Dropaces, partaking much of a like Quality, became inſtituted for the ſame End. Thus *Aetius Tetrabibl.* 1. *Serm.* 3. *Cap.* 180. and *Paulus*, *Lib.* 8. *Cap.* 19. with this View, order the Powder of Euphorbium, Pellitory, Pepper, Sulphur, and the like heating, drying, and inciding Ingredients, to be added to the foregoing ſimple and conciſe Formula, in order to render it more duly qualified for going thorough with the Work in hand, which rationally may be expected from thoſe Materials; for when by this additional Warmth, the Dropace hath attenuated the offending Humours, and drawn them from the Center to the Circumfe-

rence

rence of the Body, it cannot fail (unleſs the Contents be very groſs and viſcid) of diſperſing and conſuming them; whence theſe Medicaments are often ſucceſsfully uſed, not only in the recited Maladies, but alſo in ſeveral others, and more eſpecially thoſe attended with a cold and humid Diſtemperature, where the ſuperfluous Humours require to be diſcuſſed, the Intemperies corrected, and the relax'd Fibres braced up to their natural Tenſity; as is evident from the good Effects of the *Empl. Cephalic. cum Euphorb.* a ſort of compound Dropace, very ſerviceable in catarrhous Defluxions, and the like cold and moiſt Diſeaſes: But in paralytick Affects, againſt which theſe Rubifiers or Attractives ſeem chiefly levelled, the Caſe is ſomewhat different; for here the main and ſole Deſign is only to attract and call down the obſtructed nutritious Juices, that by their Influence the withered and pined Member may be enliven'd, and as it were brought from a State of Death and Imperception to Life and Activity again: As *Hollerius* teſtifies in theſe Words; *Hoc enim volumus, ut dropacis ope revocatâ animâ, pars quaſi e mortuâ reviviſcat, calorem ſuum ac ſpiritum recipiat, & jam proprio alimento perfruatur*; which being effected, the Dropace is then no longer to be continued, leſt by its Heat the revivifying Fluids ſhould be diſcuſs'd, and the Member thereby return to its former morbid Diſpoſition. To obviate which Inconvenience, the ancient Practitioners uſually ſubſtituted ſome unctuous or oleous Application, that might ſtop up the Pores and prevent the Exhalation of the profitable at-

tracted Humours. But as theſe are not ſo much in uſe as they deſerve, the very Name being almoſt quite obliterated and expunged in Practice, I ſhall inſiſt no farther upon their Uſe and Virtues, but paſs on to the Sinapiſms falling next in Courſe. Theſe, as the Term implies, are a Preparation of Muſtard-ſeed malaxed with the Pulp of macerated Figs, or ſour Leaven (either with or without Vinegar) into the Conſiſtence of a Cataplaſm, deſign'd to perfect what the former had left imperfect; which if remediable by any topical Application, this Preſcription ſeems to bid as fair for the Cure, as any the *Materia Medica* (though far more pompous) can afford us. For when by the premiſed Vellication of the Dropace, the ſluggiſh Humours are put in Motion, and are drawing from their Seat toward the Surface of the affected Member, and there partly by the Denſity of the Pores, and Minuteneſs of the Paſſages being arreſted, theſe Sinapiſms (conſiſting of fine ſubtil and penetrating Particles) muſt neceſſarily then be of the utmoſt Service, in reſerating the obſtructed Tubuli, attenuating the Lentor or viſcid Humour, and finally diſcuſſing the ſame by inſenſible Perſpiration. Hence in arthritic, ſciatic, inveterate Defluxions, and ſuch-like ſerous and cold Diſeaſes, the Antients reap'd the good Effects hereof, which might alſo be hoped for in ſeveral other Caſes, where a Stimulus is required to ſtir up the languid Faculty of the Part, and an additional Heat is neceſſary to allure or call down the Humours; yet notwithſtanding theſe Advantages, they have ſhared the ſame Fate with the foregoing,

ing, being now almoſt buried in Oblivion. Dr. *Fuller* indeed laments their Ejectment from the preſent Practice, and ſhews at the ſame time their Uſefulneſs and Excellency in Medicine in the following Words, which for the Reader's Satisfaction I ſhall take Leave to tranſcribe. "Sinapiſms "(ſaith he) ſince Epiſpaſticks became ſo much "in Uſe, are now almoſt quite left off, but un- "deſervedly, foraſmuch as they call the Spirits "and Humours to a weak Part, and reſtore its "Tone, and ſo do a great deal of Good in a "Palſy, Atrophy, *&c.* They attract Matter "which lieth deep to the Superficies, upon which "Account they are of Uſe in a Sciatica, and other "Pains remotely ſituate; they likewiſe revel "from the Part affected, and thereby draw away "Rheums from the Head, and Defluxions from "the Teeth and Eyes; and which is of no ſmall "piece of Service, when the Gout forſaking the "extreme Parts, flies to the Head or Stomach, "threatning great Danger, a Sinapiſm applied "to the Feet, will prohably bring it back again, "if any thing will." In the Uſe hereof ſome Cautions are neceſſary to be obſerved: 1*ſt*, As they are placed in a Medium betwixt the Dropaces and Epiſpaſticks, they muſt not be ſuffered to lie on the Part ſo long, to excite any remarkable Uneaſineſs, Pain, Heat, or Veſication (for that would be acting the Part of a Phœnigm,) but only until the Place acquire a light inflammatory Bluſh or Heat, with a ſmall Tumour and Itching. 2*dly*, In acute Diſeaſes, while the Symptoms run high, theſe ſharp ſtimulating Medicaments (unleſs

for the ſake of Revulſion to ſome inferiour Part) cannot ſafely be adhibited; therefore, ſaith *Aetius*, in hot and dry Affects we uſe not Sinapiſms. 3*dly* and *laſtly*, Where the Part is excoriated, or robb'd of its Cuticle, theſe, as they wou'd excite great Pain, and conſequently increaſe the Malady, are detrimental; but on the other hand, where none of theſe forbids, they may ſafely and ſucceſsfully be applied.

The laſt of this rubifying and exulcerating Claſs are the Phœnigms the Veſicatories. The former being of ſomewhat an ambiguous Signification, ſeems to bear relation both to the Sinapiſms and Exulcerants, being much of a piece one with another, the only Difference reſulting from the Effect, which in a great meaſure depends upon the Time of their adhering to the Part affected; for a Sinapiſm, if ſuffered to abide thereon any conſiderable Space of Time, will firſt excite a troubleſome Heat and Smarting, and afterward ſmall Veſicles or Bliſters, like as an Epiſpaſtick itſelf would perform: Therefore Practitioners are not well agreed, but ſeem partly to heſitate under what Head to rank them. Some promiſcuouſly inſerting them amongſt the Veſicatories; and others claſſing them at the Head of the Sinapiſms. *Hollerius* poſitively declares in Favour of the former, ſaying that a Phœnigm not only rubifies, but alſo veſicates and exulcerates the Skin, rehearſing at the ſame time all the known Veſicatories then in Uſe; not excepting the *Canthariides*. The like Account we meet with in *Fernelius*, *Heurnius*, and ſome other

other learned Authors. But *Hercules Saxonia*, treating in his *Pantheum* particularly upon this Subject, ſeems to come nearer the Truth of the Matter than any of his Predeceſſors or Cotemporaries, who defines a Phœnigm to be an external Remedy, hot, ſharp, and attractive, inducing a Redneſs upon the Part, as the *Greek* Word φοινίσσω *rubefacio* plainly denotes; but by reaſon of the different degrees of Quality, various Phœnigms, as Dropaces, Sinapiſms, Veſicatories, *&c.* occur, whereby it is evident that a Phœnigm is only a general Term for all the rubefying and exulcerating Medicaments, having as much Affinity to one as to another, and therefore doth not ſeem worthy of our farther Conſideration, unleſs (for the ſake of Diſtinction) we ſhall allow them a particular Place, ſituate between the loweſt Degree of Veſication, and the higheſt of Rubefaction, ſuch as when the ſubjacent Skin begins to be affected with a preternatural Heating, Smarting, and pungent Senſation, and alſo be inſperſed with ſmall miliary Veſicles (like as when an Epiſpaſtick firſt begins to operate, or when a Nettle is ſlightly drawn over the Skin.) And this, in my Opinion, is what may properly and truly be call'd a Phœnigm; the Uſe and Virtues whereof are ſo confederate and link'd in with the Epiſpaſticks and the preceeding Sinapiſms, that were it neceſſary to enter into a Detail of each, 'twould oblige us to have Recourſe to both Intentions. The former being ſufficiently diſcuſſed hath no farther Place here; and the latter rather belonging to the Phyſician's than the Sur-

geon's Province, may very well be omitted: However it may not be improper, by the way, to obſerve, that whereſoever Veſicatories are of Service, theſe milder Exulcerants cannot be uſed in vain; whoſe Efficacy *Hollerius* and *Heurnius* (two Authors of good Credit and ſound Judgment) have extended not only to ſome few particular Caſes, ſuch as the Gout, Sciatica, Hemicrania, Cephalea, Epilepſy, Lethargy, *&c.* but alſo to ſix hundred other old chronical and contumacious Maladies, from whoſe Tyranny and deſtructive Events, we may ſafely affirm, ſo many thouſand Lives have been ſaved; and that not only in the recited numerous black Catalogue of mortal Evils, but even in one only acute Diſtemper, more formidable and fatal than them all put together.

But of this ſufficient. I ſhall now proceed to the ſecond Diviſion of theſe Pyroticks; wherein are included thoſe Medicaments call'd by *Galen*, 5 *Simpl.* 15 *Cathæretica*, and by the *Latins* very pertinently *Exedentia*, *Deradentia*, and *Auferentia*, upon Account of their eating and corroding Faculty; which being attended with no miſchievous Conſequence, neither with any Pain worth taking notice of, renders them a very ſerviceable and uſeful Dreſſing upon many Occaſions: But here 'tis only to be underſtood of thoſe Medicaments that ſtrictly and properly may be term'd Cathereticks; for if we (in purſuance of the uſual lax Method) ſhall compriſe herewith all thoſe Remedies, which Authors have collected from various and ſundry Claſſes to ſerve this Intention,

we

we muſt neceſſarily expect to meet with all thoſe different Effects and Accidents, that are the common and inſeparable Attendants of the eſcharotick, cauſtick, and ſeptick Tribes. From whence they have deduced an ample Stock to fill up this Catalogue withal: Some of them I take to be highly exceptionable, ſuch as the Juice and Aſhes of Tithemale and the other Spurges (well known Depilatories and Exulcerants,) as likewiſe the incinerated Subſtances of Vegetables and their lixivial Salts, wherefrom are prepared the moſt noted Cauſticks now in Uſe, together with thoſe fam'd Blood-ſtoppers the burnt Vitriol and *Calx vivum*, that violent Cauſtick the Corroſive Sublimate, and that virulent Septick, Arſenick; with diverſe others borrow'd from the deterſive and epulotick Claſſes, as may be ſeen in their proper Chapters: All which are ſo promiſcuouſly inſerted under this Appellation, that it ſeems ſomewhat difficult to diſtinguiſh betwixt them, eſpecially by the younger Surgeons, who ſtand moſt in need of Inſtruction and Caution in the Uſe of theſe edg'd Tools, for whoſe Sake chiefly, they ought to be reduced to more narrow Limits than what are generally preſcribed. To attempt this Regulation, would be a Taſk of the utmoſt Difficulty, by reaſon of the great Dependence and Affinity they have one with another, as *Fernelius* teſtifies, ſaying, that they *(i. e.* the Cathereticks, Eſcharoticks, Cauſticks, *&c.)* are all of one kind, and only differ in their Degrees of acting, which in a great meaſure depends upon the different Subject they are applied to; with ſeveral other

Circumſtances that may vary their Effects; as Age, Sex, Temperament, Magnitude, and Quality of the Diſeaſe it ſelf, together with the Manner and Form of the Application, as hath been remark'd in ſeveral of the preceding Intentions; wherein is ſhew'd, that Medicaments do not always act according to their peculiar Nature; for they retain, alter, or change their operative Faculty, according as the different Nature of the Subject ſhall diſpoſe them. Whence appears the Reaſon of this lax Diviſion, and why theſe pyrotick Medicines do ſo frequently make Incurſions into one another's Province. In order to make a due Separation, 'tis neceſſary firſt to obſerve, that as theſe Cathereticks are generally ſtation'd by the Moderns between the Epiſpaſticks and Eſcharoticks, it ſeems thereby deſign'd to erect the Partition Walls of their due Extent; beyond which, they ought not to paſs, ſo as to act either Part, that is, of exulcerating or deſtroying the Texture of the Cuticle, as do the former, nor therewith to penetrate deep into the Subſtance of the Parts, as is the peculiar Property of the latter; but only to level and wear away the looſe and ſpongy Fleſh, that through a Default of Nature, or Inadvertency of the Surgeon, is ſometimes ſuffer'd to ariſe in the Cavity of Wounds and Ulcers, to the great Hindrance of the Cure; which being remov'd, and the Intention thereby ſatisfied, their Effect or farther Proceeding ceaſeth. And this I take to be the true Property of a Catheretick: For if the Medicament ſhou'd divel or exulcerate the exterior Teguments,

guments, or extend their Efficacy beyond the Baſis of the fungous Excreſcence, into the ſubjacent ſound Parts, they inſtantly thereupon loſe this Denomination, and aſſume others more proper to their different Effects and Modes of Operation. And this ſeems to have been the Sentiment of *Fallopius*, when he affirm'd theſe Remedies only to waſte and conſume the ſuperficial luxuriant Fleſh, by ſcraping or ſhaving off its upper Part, as it were, with a Razor; whence they came to be call'd Cathereticks. And of this Mind is *Petr. Pigræus*, who tells us in his *Epitome*, *Præcept. &c.* that they do only eat away the Fleſh, but cannot act upon the Surface of the Cutis ſo as to fret or conſume its Subſtance. Therefore we find theſe topical Applications to conſiſt of groſs, dry, and earthy Parts, whereby they conſume not only the ſuperfluous and preternatural Humidity, (a common Attendant in theſe Caſes) but alſo cut off the proper Aliment of the Diſeaſe (*i. e.* the Hyperſarcoſis) it ſelf. But leſt this ſhould prove inſufficient to take away the whole Malady, there is uſually a ſuitable Degree of Heat and Acrimony conjoin'd; by which Means they approach the Nature of a Deterſive, in wearing and gnawing down the Surface of the lax extuberant Fleſh, into the Form of a ſlight Cruſt or Eſchar. To which ſaid Intention, as well as the ſucceeding Epuloticks, *Galen*, 3 *Meth.* 6, aſſures us, theſe Remedies bear a great Affinity; ſaying, the abſuming of an Hyperſarcoſis is not properly the Work of Nature, but of Medicines that do vehemently dry: For the Cathereticks

reticks certainly are next to thoſe that moſt powerfully and ſtrongly mundify, and alſo to thoſe that cicatrize; exemplified by Miſy and Chalcitis, that in humid Conſtitutions will rather conſume the Fleſh, than harden it into a Callus. But quite the reverſe happens to Subjects of a contrary Temperament and Diſpoſition; therefore many do indiſcriminately and injudiciouſly apply them for each Deſign. But we (continues our celebrated Author) when in want of other Medicines we are compell'd to uſe theſe as an Epulotick, do take a little of the fine ſubtil Powder of Miſy, Chalcitis, *&c.* upon the Point of a Spatula, and therewith lightly inſperſe the Face of the Ulcer that requires to be cicatriz'd; or if we intend to adhibit the ſame as a Catheretick, to conſume or diminiſh the ſupercreſcent or overgrown Fleſh, then we apply the ſaid Powders more liberally. Thus this illuſtrious Writer teacheth us how by one and the ſame Remedy we may perform two different Intentions, and that only by diminiſhing or increaſing the Quantity of the Medicament; which ſhews that the Effect depends thereon, as well as upon the Conſtitution of the Body, and other material Circumſtances; and for that Cauſe claims an equal Regard in Practice, without which, many inevitable Errors muſt neceſſarily ariſe. The Medicaments falling under this catheretick Appellation, are chiefly deduc'd from the vegetable, mineral, and foſſil Tribes; ſuch as the Powder of Savin, Aſphodel, black Hellebore, Roman Vitriol, Verdigreaſe, burnt Allum, Turbith Mineral, and that uſeful Dreſſing the red

Preci-

Precipitate, as likewiſe the *Unguent. Apoſtolor. Ægyptiacum*, and ſome other unctuous and humid Dreſſings, which by reaſon of their Conſiſtence, oppugning the main Indication of drying and adſtringing, may well be omitted, as highly exceptionable for this Uſe, according to the Judgment of *Galen*; who hath expreſly declar'd that theſe Medicaments ought vehemently to dry, in order to cut off the Avenues that might impart Nouriſhment to the Diſeaſe: And for that Cauſe we find him always preſcribing the ſtrongeſt Kind; of which Sort, are the Powder of burnt Braſs, or its *Scoriæ*, burnt Allum, Chalcitis, Sory, Miſy, Stibium, Calx of Antimony, and the like metalline and foſſil Subſtances; which being duly calcin'd and edulcorated by Ablution, (in order to diveſt them of their arſenical Sulphur and corroſive ſaline Principles, that render'd them ſeptick and eſcharotick) become thereby leſs acrimonious, and conſequently (as the aforeſaid Author rightly obſerves) more mild and gentle in Operation. Whereto, for a Concluſion, may be added, the *Troch. Andron. Polyid. Paſion. Muſæ.* and ſeveral others now buried under the Ruins of Antiquity; whereof *Galen*, *Paulus*, *Aetius*, *Avicenna*, *Rhaſis*, and other *Greek* and *Arabian* Phyſicians, of high Eſteem, make mention: But as they are now out of Uſe, theſe few here exhibited, may ſerve the Turn upon all Occaſions, where required. Therefore I ſhall enlarge no farther hereon, ſeeing what is deficient will be accounted for amongſt the eſcharotick and cauſtick Remedies that next fall in Courſe, and compleat the third

and

and laſt Diviſion of the pyrotick Claſs; wherein they will be found no leſs complicate and clouded with Obſcurities, than any of the foregoing.

For although ſeveral Authors have been at the Pains of dividing theſe two laſt Pyroticks into ſeparate Claſſes, yet as their Virtues, Qualities, and Effects, are ſo mutual and correſponding, as hardly to be diſtinguiſh'd, they may very well be allow'd to paſs under one general Deſcription and Denomination, the Product of both being the ſame; *i. e.* a Cruſt or Eſchar, which only differs *ſecundum magis & minus.*

The Eſcharoticks, according to their Diviſion, are confin'd to the Cutis, and the Cauſtick allow'd the Liberty of penetrating deeper into the ſubjacent Fleſh and muſculous Parts, according to the Doctrine of *Fernelius*, *Jonſton*, *Heurnius*, and ſome others of good Credit, who unanimouſly agree that an eſcharotick Medicine burns only the Cutis to a Cruſt, and paſſeth no farther; but a Cauſtick, ſay they, carries its Effects more remote and deep, making a *ſolutio continui* not only of the true Skin, but alſo of the muſculous Fleſh; eating and corroding deep thereinto, leaving a much thicker and denſer Eſchar. But *Fallopius*, who was an able and experienc'd Surgeon, and well vers'd in the Writings of the Ancients, ſeems to come nearer the Mark that *Galen* aim'd at, when he affirms theſe Eſcharoticks to be the moſt painful and dangerous of all others, inducing great Pain and Inflammation; and although their groſs and terrene Nature, as he tells us, hinders them from ſuddenly entering the

the Subſtance of the Parts, yet if ſuffer'd to continue any while thereon, their durable and intenſe Heat gains them Admittance, ſo as to produce their miſchievous Effects; corrupting not only the Member, but even ſometimes the whole Body: And therefore very prudently claſſeth them at the Head of all the potential Cauteries, whereof he makes four Diviſions, and enumerates under 'em all the ſtrongeſt Cauſticks then in Uſe; ſuch as *Galen* of old recommended for repreſſing the moſt violent arterial Hemorrhages whoſe Efficacy that Way he ſcruples not to compare with the hot Iron. Of this Sort are Miſy, Chalcitis, Vitriol, crude or burnt; with ſome others of the like Nature and Quality, to be met with *Lib.* 5. *Meth.* 4. and 5 *Simpl.* 15. where that worthy Author gives them the Appellation of Eſcharoticks. *Weckerus* likewiſe, having the ſaid Authority in his Eye, poſitively declares, that theſe Medicaments (ſo call'd from their Effects) are of an exceeding cauſtick and igneous Faculty, whereby they colliquate and burn the Body like Fire it ſelf, making an Eſchar after the Manner of a Cautery, inferring a dolorous Senſation ſomewhat reſembling the pungent Stabs of an Awl, or ſuch like Inſtrument, forcibly entering the Subſtance of the Member.

Which Doctrine, as it is founded upon practical Experience, and ſupported by the Authority of the Ancients, needs no other Teſtimonial to prove that Eſcharoticks and Cauſticks are but one and the ſame Thing (whatever may be averr'd to the contrary) unleſs we ſhall allow the one to be

in

in fieri, and the other *in facto*; or, which is all one, the Cauſtick to denote the Action, and the Eſcharotick the Effect; which is an Abſurdity, and therefore cannot be own'd as a juſt Diviſion: Neither can we comply with *Holtzemius*, who in Favour of *Fernelius* claſs'd them between the epiſpaſtick and cauſtick Tribes; nor with others, to circumſcribe them with the Cathereticks and the ſaid Cauſticks: For although we might allow the ſame to hold good in ſome Caſes, yet Experience tells us 'twill not in others; there being ſeveral Circumſtances whereon the Effect depends, ſuch as Age, Sex, Habit, Quantity, Time of Duration, *&c.* that will alter and diſpoſe the Efficacy of the ſtrongeſt Cauſtick, ſo as to become a mild cutaneous Eſcharotick; and, contrariwiſe, the latter to aſſume the Property and Office of the former. Whence we conclude the Separation to be not only needleſs, but alſo very embarraſſing to the young Practitioner. We ſhall therefore reduce them under one common Appellation or Term, it being not very material whether we call them eſcharotick, or cauſtick; ſeeing, as *Galen* very judiciouſly obſerves, Health doth not ariſe to the Patient from an exact Impoſition of Names, but a right Application of convenient Remedies: For equivocal Words, and Multiplicity of Names and Diviſions, have always been one great Obſtacle in the Art of Healing, leading the young Practitioner very often into ſundry Errors, clouding his Notions, and cauſing him to doubt what Courſe he ſhould take; and, which is yet worſt of all, to fall into ſome groſs Miſtake, in the midſt of

of a hopeful Progreſs; as that excellent *Roman* Phyſician, Dr. *Baglivi*, hath well remark'd.

To avoid which Perplexity, I ſhall briefly conclude, that all Medicaments inducing a Cruſt or Eſchar, whether deſign'd for opening an Abſceſs, or for cauterizing the Mouths of the Veſſels, or any other Uſe, where the exterior Teguments (by virtue of a potential Heat, or latent igneous Faculty) are burn'd and conſum'd ſo as to produce the recited Effect, are moſt rightly term'd Cauſticks: As *Julius Cæſar Claudinus* witneſſeth, in theſe Words; *Eſt autem ignis potentialis, per medicamenta actu frigida, poteſtate verò calidiſſima, quæ à Latinis Cauſtica, à Græcis Eſcharotica nuncupantur.* And *Hollerius*, ſpeaking to the ſame Effect, likewiſe thus expreſſeth himſelf by way of Confirmation: *Et medicamenta* (ſays he) *quæ aperiunt, natura certe cauſtica, ideoque a quibuſdam veterum cauteria frigida vocata, a recentioribus potentialia, &c.* Which is as much as to ſay, that all theſe Remedies partaking of an intrinſick fiery Quality, are in themſelves no leſs cauſtick than the actual Cautery, operating even as forcibly and powerfully as the hot Iron, and in Effect might be look'd upon as one and the ſame, did not the Form and Manner of Application determine it otherwiſe; which truly muſt be granted widely different in many Reſpects: For the ignited Inſtrument carries the actual Fire along with it, and impreſſeth its Quality immediately and inſtantaneouſly upon the Part affected; whence came the Name of the actual Cautery: Whereas, *è contra*, the other exhibits no Appearance of that Element,

Element, but is applied cold, and doth not exert its Energy or operative Faculty for ſome Space of Time afterward, until by the Heat and Humidity of the Body the active ſaline Particles of the Medicament become liquified and diſſolv'd, which then corrodes and deſtroys the Texture of the Subject with as great Vehemency as the other. And therefore the Ancients (from their cold Appearance, and partly alſo for a Note of Diſtinction) gave them that frigid Appellation, now chang'd by the Moderns for that of Potential: Of which Sort there is ſtill a great Variety retained in Practice, though not half ſo many as in the Days of old, yet fully ſufficient to anſwer all the neceſſary Intentions. Some of the moſt common and uſual, may be met with in ſeveral of the foregoing Pages; wherein I have been very particular in deſcribing and explaining the Uſe, Virtue, and Manner of Application, of all the cauſtick Kind (both actual and potential;) comprehending therein, moſt that is requiſite to be ſaid upon this Subject. So that I ſhall now put an End to this Diſcourſe, with ſome few Remarks that hitherto have either been lightly touch'd upon, or elſe wholly omitted.

And firſt, to give the Reader a comprehenſive and clear Idea of theſe medicinal Cauteries, I ſhall divide them into two Kinds; the one acid, and the other alkaline: The former generally partakes of a very ſtiptick and aſtringent Faculty, being deduc'd from the mineral and foſſil Claſs, wherein a corroſive acid Salt or cauſtick Sulphur hath uſually the Predominancy, conjoin'd with a

Portion

Portion of the groſſer and earthy Principles; whereby they not only more powerfully cauterize and ſhut up the Orifices of the bleeding Veſſels, ſealing them up, as it were, with a firmer and ſtronger Eſchar, (for which Uſe they ſeem chiefly deſign'd) but alſo by adhering more pertinaciouſly thereto, ſecure the ſame againſt a freſh Eruption; which is all that *Galen* in the forecited Place ſeems to require from a powerful Iſchaima, or cauterizing Styptick; namely, that theſe Medicines forming an Eſchar, ſhall not only be hot, but have alſo an aſtringent Faculty annex'd: And therefore he rejects the *Calx Vivum*, as wanting this latter Quality, and in lieu thereof, ſubſtitutes the Miſy, Chalcitis, and vitriolick Preparations, as being more ſerviceable for this Intention, on account of the great Aſtringency they bear, a Qualification in this Caſe, no leſs requiſite than that of a Cauſtick, as I have ſhew'd at large in the eleventh Chapter of this Book; where the Reader will meet with moſt of the fam'd aſtringing Cauteries now in Uſe, whoſe Nature, Quality, Manner of Operation, and Effects, if duly conſider'd, will oblige us to own that theſe are rather (if a Diviſion be thought needful) the true Eſcharoticks of the Ancients, than thoſe weak ſaponaceous Compoſitions which according to *Fernelius* and ſome others are appointed to finiſh their Operation within the Verge of the Cutis.

The ſecond and laſt Diviſion of the potential Cauteries, which *Jo. de Vigo* and *Aquapendente* in reference to their Uſe very pertinently call'd Raptories, are uſually, for the Sake of timorous Per-

ſons, brought in as a *Succedaneum* to the Knife and Lancet, in the Apertion of Abſceſſes, Fontanels, and the like; therefore they differ pretty much from the former, being of an alkaline Nature, wholly diveſted of all groſs and terrene Particles, that might communicate an aſtringent or ſtyptick Faculty unto 'em: Which however ſerviceable in the foregoing (where a hard, fix'd, and permanent Eſchar is needful to ſhut up the Mouth of the wounded Veſſel, whilſt Nature is forming a new Covering for it) is notwithſtanding here of little or no Service, but rather detrimental, both in Operation and Effect; by inducing not only great Dolor, and other worſe Symptoms, but alſo a ſlow and tedious Separation of the burnt Sloughs, to the great Hindrance and retarding of the Cure: An Accident very common to thoſe Medicines us'd of old, before the Art of Chymiſtry produc'd theſe ſalutary Compoſitions obtain'd from Vegetables; wherein nothing of that deleterious and noxious Quality reſides, that gave the Ancients ſo great and juſt Occaſion of Complaint, but only a ſimple elementary Principle, or lixivial Salt, impregnated with a Portion of the igneous Atoms communicated thereto in the Preparation. As the learned Profeſſor *Boerhaave* witneſſeth; that the cauſtick Faculty of the *Lapis Infernalis*, and other lixivial fiery Salts, (whereof we now treat) does in a great Meaſure proceed from the Fire concentrated in the *Calx Vivum* and Aſhes, augmented afterwards by the Force of Heat us'd in the Proceſs, whereby (ſaith he) they preſently liquify and diſſolve (or rather burn to a

Cruſt) all the Parts of a human Body, like to Fire it ſelf; and conſequently muſt be of great Service in ſeveral chirurgical Affairs.

The moſt common (as now lately obſerv'd) are, the Apertion of Tumours and Iſſues, eradicating of callous and fiſtulous Ulcers, extirpating verrucous and fungous Excreſcencies, venereal *Stigmata* or Extuberances; and laſtly and generally, in all or moſt Caſes where an Illuvies of preternatural Contents requires to be evacuated or conſum'd; theſe lixivial potential Cauteries are the ſafeſt, mildeſt, and moſt effectual Remedy: Their ready Diſpoſition to run *per deliquium*, with the minuteſt Degree of Heat or Humidity, recommends them alſo for ſeveral other Uſes, and gains them Admittance, by an artful Management, into ſeveral neceſſary Compoſitions and extemporaneous *Formulæ*; whereby foul ſanious Ulcers may be deterg'd, the Laxity and Malignity of others corrected, and, if Occaſion were, (as the ſaid Author tells us) we might render the ſame Medicament coſmetick, to cleanſe the Skin from Freckles, Spots, and the like Defedations, or herewith circumſcribe the Limits of a Gangrene. But as a ſharp Diſeaſe muſt have a ſharp Remedy, I ſhould rather prefer and recommend the *Butyr. Antimonii* upon this Occaſion, coming neareſt to the actual Cautery, both in Quickneſs of Operation, and Certainty of Effect; having this peculiar Advantage, of leaving no hard Eſchar behind it, as the other Cauſticks do; neither any venenate or noxious Quality, as common to the Septicks: But only a colliquated lax Subſtance,

eaſily ſeparable from the ſound and uncorrupted Parts, whence accrue ſeveral great and notable Advantages; inaſmuch as the cauſtick Salts of this Remedy are not fetter'd and lock'd in with a hard thick Cruſt, (the uſual Product of the cauterizing Claſs) we may probably conclude that the ſaid ſaline Particles have an Opportunity of penetrating deeper, and conſequently of undermining more readily the putrefactive virulent Humour, whoſe Activity being thus intercepted, and the Malignity alter'd and corrected, a Stop is put to its farther proceeding, by the Mediation of a Trench caſt up between the dead Parts and the living: And farther, by virtue of the ſaid colliquative or diſſolving Faculty, it conſumes and takes down even by the very Roots, the moſt inveterate and rebellious fungous Excreſcencies, not ſuffering them to repullulate or ſprout up again; opens and makes way for the commodious Application of Dreſſings to a corrupted and carious Bone, without being at the Trouble of dilating with Tents, Doſſils, and the like tedious and dilatory Proceedings; and, finally, (omitting many other good Uſes of this ſerviceable Medicament) it excavates and enlarges the Cavity of Fontanels, when almoſt dried up, or grown hard and callous, after a much ſafer Manner than can be attempted by the arſenical Tribe of Septicks, ſo much cried up by that eminent Practitioner *Ludov. Mercatus* for this Deſign; who in *Lib.* 1. *De recto præſid. Artis Medicæ uſu*, ſeems to be very fond of theſe dangerous Edge-Tools, contrary to the Sentiments of the reſt of his Brethren, who long ſince have

have exploded and baniſh'd them out of Practice for ſeveral Reaſons already given, and for whoſe Sake the whole Claſs of potential Cauteries have ſuffer'd much in their Reputation for a long Current of Ages, even from the Time of *Albucaſis* to the Cloſe of the laſt Century; the actual Cautery, by the unanimous Conſent of the Learned, (during that Interval of ſix hundred Years and upwards) having the Preference in moſt, if not all Occaſions. The greateſt Admirer of the fiery Inſtrument, next to the recited *Arabian* Author, is the famous *Marcus Aurelius Severinus*, who in his *Pyrotechn. Chirurg.* rehearſing up the Benefits thereof, writes thus; that "Fire is endu'd with an "omnipotent Virtue, and is a moſt efficacious Re-"medy for all Diſeaſes, both internal and external, "acute and chronical, ſimple and compound;" and in ſeveral other Places of the ſaid Book he affirms it to be the greateſt *Arcanum* in conquering and removing all preternatural Affects incident to human Bodies. And *Guido* himſelf, though otherwiſe a great Enemy to all cruel and painful Operations, doth yet, in Compliance with *Brunus*, *Theodorick*, *Lanfrank*, and other ancient Surgeons, his Predeceſſors, give in his Verdict amongſt them in Favour of the hot Iron; ſaying, that the actual Cautery is ſafer than the potential, and infers leſs Damage to the neighbouring Parts than the Action of a Ruptory; which is much ſuſpected in or near to the principal Members.

Of the ſame Opinion is *Jo. de Vigo*, *Lib.* 8. *cap.* 15. where he obſerves from *Avicenna*, that the actual Cautery, if moderately us'd, is a very no-

ble Remedy, much better and ſurer in Operation than the other, by reaſon of the Simplicity of Fire; whoſe Action hurteth not afterward, as the corroſive, putrefactive, and cauſtick Medicaments too commonly do, inducing Inflammation, Fever, Spaſms, great Dolor, and very often worſe Accidents; as *Claudinus*, *Pernumia*, *Fab. ab Aquapendente*, and others, have from their own proper Experience obſerv'd to be true. Therefore all the more early Moderns, even to this laſt Age, being apprehenſive of ſome ill Conſequence, ſuch as a Gangrene, Sphacelus, *&c.* that might ariſe from a Corruption of the Part, or Extinction of its natural Heat, by the Virulency of the Application, have with a general Conſent ſubſcrib'd to *Aetius*'s Opinion, that the glowing Iron, however terrible and frightful it may appear, is notwithſtanding far more ſafe and excellent than the medicinal Cauſticks are.

The Uſe and Benefits of the inſtrumental Cautery, are by *Vigo* deliver'd after this Manner: "1. ſaith he, It comforts and corroborates the "languid Heat of a weaken'd and cool'd Mem-"ber; 2. rectifies the Dyſcraſis or Intemperies "of it; 3. prohibits Putrefaction in it; 4. re-"ſolves and exiccates corrupt Matter; 5. mor-"tifies and extinguiſhes the Venom of malignant "and peſtilential Abſceſſes, poiſonous Bites, *&c.* "6. ſeparates the corrupt from the ſound Part, as "in a Caries of the Bones; 7. opens Apoſtema-"tions for the Diſcharge of their purulent Con-"tents; 8. reſtrains a violent Hæmorrhage, by "making a firm and deep Eſchar; 9. evacuates

"and

" and diverts catarrhous and inveterate Defluxi-
" ons upon the Eyes, being applied to the co-
" ronal Commiſſure, or Meeting of the coronal
" and ſagittal Sutures; 10. enlarges fiſtulous Ul-
" cers, and 11. deſtroys their Calloſity; 12. re-
" duces the circular Form of Ulcers to a better
" Figure and Diſpoſition of healing; 13. eradi-
" cates glandulous and ſchrophulous Excreſcen-
" ces; 14. intercepts Diſtillations of Rheums;
" and laſtly, diverts their Courſe to ſome neigh-
" bouring and ſtronger Part."

For which good Offices, the learned Practitioners of old had this celebrated Remedy in great Eſteem, and did uſe diverſe Forms upon ſundry Occaſions; a great many whereof are now grown obſolete, and thrown out of Practice as too painful and troubleſome to be endured: A Circumſtance not ſo much regarded in the primitive Ages, where the Pain was ſlighted for the Profit's ſake; as now the contrary happens in our Days. For if we look into *Aetius* and *Albucaſis*, who wrote copiouſly upon this Subject, we ſhall find them to have ſpared no Part of the Body, that might be conducive towards eradicating or draining off the Source of the Diſtemper; and this with ſo happy Succeſs, that as the late learned Dr. *Freind* informs us, very ſurprizing Cures were often performed, even in the moſt inveterate and contumacious Maladies; ſuch as the Epilepſy, Palſy, Aſthma, Empyema, Phthiſis, Sciatica, and diverſe others recorded by the ancient Doctors, who generally made very free with the Cauſtick for ſeveral Intentions, and more particu-

larly in reference to Fontanels or Iſſues, than all the other Uſes of the Cautery whatever; it being common with them, in purſuance of the Model drawn out by *Archigenes*, to impreſs ſeven, nine, fifteen, or upwards of theſe Emiſſaries in various and different Parts of the Body at one Time; which being kept open a due Space, ſerved as ſo many little Rivulets to drain off the Relicts of the Diſeaſe, and totally extirpate the morbifick Matter, and that with ſuch proſperous Succeſs, as ſeldom or ſcarce ever to fail in the deſired Event.

Wherefore this Practice ſtands recommended upon the Authority of ſeveral authentick Teſtimonies; as the laſt and ſole Refuge in all deplorable chronical Caſes. Amongſt the Moderns, *Ludov. Mercatus de recto præſidior. artis Med. uſu*; and *Hieronym. Mecurialis Reſp. & Conſ. Tom.* 3. *Lib.* 1. *cap.* 20. together with many more judicious and learned Perſons, ſpeak to the ſame Effect; *viz.* when Bleeding, Purging, Bathing, Diet, Exerciſe, and the like ſenſible and inſenſible Evacuations have been uſed in vain, we are then (as *Amat. Luſitan. Centur.* 5. *Curat.* 7. adviſeth us, in Conjunction with the recited Authorities) to have recourſe to Fontanels, as a moſt certain and approved Remedy. And laſtly, *Corn. Celſus*, *Lib.* 4. *cap.* 22. diſcourſing upon this Topick, poſitively affirms, that Iſſues are the laſt and moſt effectual Help in all inveterate and diuturnal Diſeaſes: Whence we may lawfully ſay of them, as *Hollerius* did once in Vindication of compound Purgatives; *niſi enim eſſent bona, jamdiu* (ſays he)

he) *ab uſu depoſita eſſent.* A very pertinent and juſt Remark, applicable to all the ancient Remedies now in Uſe; whereof this is none of the leaſt conſiderable, having ſtood the Teſt of many Ages, and yet remains in *ſtatu quo*, without any material Difference or Variation made therein, ſaving the Improvements which the *Arabian* Phyſicians attempted with good Succeſs; amongſt whom *Rhaſis* is the firſt and principal that challenges the Credit of this Reformation, very judiciouſly tranſpoſing the Place, from the membranous and hard Parts, to the more ſoft and fleſhy, or rather the Interſtices of the Muſcles; being far more commodious for dreſſing and retaining the Peas, and alſo more advantageous for a copious Efflux of Humours, from the Divarication of the adjoining Veſſels, than could poſſibly be expected from the former ancient Method, labouring then under many Inconveniences, and as I may ſay, greatly deficient in all the requiſite Conditions and Qualifications that the later Practitioners have appointed for a laudable and well conſtituted Fonticle, in which four Things are principally to be conſider'd: 1*ſt*, That it be ſeated near to ſome large Veſſel or its Branches; 2*dly*, in the Interſtice, or intermediate Space of the Muſcles; 3*dly*, in a Part commodious for a Ligature; 4*thly* and *laſtly*, that the Patient may ſee it and dreſs it himſelf, according to the Doctrine of that confummate Artiſt *Fabrit. ab Aquapend.* who hereby ſeems directly to point at the common Place of Iſſues made in the Limbs; and utterly to reject all the other Parts, that enjoy

joy not the Benefit of theſe Advantages; as himſelf hath farther and more fully declared, ſaying, Fonticles are not to be made in the Back, Foot, and the like obſcure Places, but only in the Arms and Legs, being more advantageouſly ſituate for evacuating the offending Humours, either by Derivation, Interception, or Revulſion.

The former poſſeſſing a due Medium or equal Diſtance between the Head and Thorax, comprehends or takes in all the Diſeaſes of thoſe Parts; deriving from the neareſt, and revelling from the remoteſt; as doth the latter from the lower *Viſcera* and Parts depending: Therefore in Affects of the Head, Eyes, Ears, Jaws, Larynx, and Cheſt; ſuch as the Epilepſy, Palſy, Ophthalmy, Dulneſs of Sight and Hearing, Hoarſneſs, Catarrh, Cough, Aſthma, Phthyſick, Hemoptoe, Palpitation of the Heart, *&c.* a Fonticle or Iſſue made in one or both Arms, between the Deltoid and Biceps Muſcles (internally or externally) is a ſovereign and approved Remedy, confirm'd by ſeveral great Authorities, who have inſtituted and mark'd out this Part to be the Emiſſary or Outlet of the recited Maladies; like as the Legs are appointed for diſcharging the noxious Contents of the Spleen, Womb, Reins, and other adjacent and inferiour Parts; whence hyſterick, hypochondriack, melancholick, nephritick, and uterine Affects have their Source and Origin; together with many more depending on different Cauſes and Parts remote; that for the ſake of a more powerful and ſtrong Revulſion, equally challenge

challenge a Paſſport or Tranſmiſſion through the lower Paſſages.

The firſt and moſt uſual Place wherein theſe Conduits are opened, is on the inner ſide of the Leg, about three Finger's breadth beneath the Knee, in that Interſtice, ſeated betwixt the inner Edge of the *Tibia*, and the gaſtrocnemius Muſcle; a Part peculiar to feminine Affects. And therefore the aforeſaid judicious Author gives this prudent Counſel; that in Women, whether the Fonticle be placed above or beneath the Knee, it ought, for the ſake of the Womb and *Menſes*, alway to be made on the Inſide, by reaſon, ſaith he, the outer hath no neighbouring Veins, but the internal hath the *Saphena* near at hand, and therefore is much better.

Yet in Men, and thoſe eſpecially that ride much on Horſeback, the exterior or outer Side may ſometimes be diſpenſed with, at or about the ſame Diſtance from the Knee, between the greater and leſſer Foſſils. In the Interſtice of the *Tibialis Anticus*, and the *Peronæus Longus*, or *Primus* Muſcles.

Laſtly, *Spigelius* for the Cure of a Sciatica, uſed to make an Iſſue with great Succeſs, on the back part of the Leg, betwixt the two Bellies of the *Gaſtrocnemius*; telling us, he had learned by frequent Experience, that a Fonticle ſet in the *Sura* (whereto the *Vena poplitea* diſperſes or ſpreads its Branches) hath often done a great deal of Good in many Diſeaſes: But as the Place by reaſon of its Declivity is ſomewhat incommodious and troubleſome, *Scultetus* very prudently

dently choſe a higher Station; affixing the ſame betwixt the two Heads of the *Gemelli*; wherein all the neceſſary Qualifications of a good Fontanel are to be met with, both in reſpect of Site and Office: And therefore it is deſervedly commended by that well experienced Artiſt, for removing and dreining away the Cauſe of the recited exorbitant Diſtemper; and having proved the happy Effect of it upon his own Body, earneſtly exhorts Practitioners for the future (all other Helps proving fruitleſs and unſucceſsful) to have Recourſe thereto, as a moſt certain and approved Help in the greateſt Extremity; whereby, ſaith he, I doubt not but Health will accrue to the Patient, and great Credit to the Surgeon. And thus much for Iſſues made with the Cauſtick, whereon I ſhall inſiſt no longer: Although there are ſome other Places of the Body that deſerve a particular Conſideration, on Account of their great Service; yet as it rather belongs to another Subject, and might here be look'd upon as a Digreſſion, I ſhall put a Period to the whole; with only obſerving, that as the Preference is here, by the unanimous Conſent of the Learned, given to the actual Cautery, and the other rather condemned as venenate and malign; 'tis only to be underſtood of the poiſonous, arſenical, and ſeptick Tribe, whereon the Odium is juſtly caſt; which by no Means is applicable to the milder and ſafer Claſs of potential Cauſticks; which rather deſerve Praiſe and Commendation, being in ſome Reſpects (altho' not altogether) as ſerviceable as the former; and therefore,

therefore, in my Opinion, where each may be uſed to the beſt Advantage, 'tis beſt to begin with the actual Cautery; which being an Inſtrument that may dexterouſly be governed, and confined in the Operation to more narrow Limits than the potential or medicinal Kind, is therefore more proper and effectual in reſtraining a violent Hemorrhage (omitting the Denſity and Firmneſs of the Eſchar, that may be brought in upon this Head in behalf of the hot Iron.) 2*dly*, By virtue of its heating and drying Quality, 'tis excellently well ſuited for abſorbing, diſcuſſing, and exſiccating ſuperfluous Humidities, and upon that Score takes Place of the other, in diſquammating a putrid and carious Bone. 3*dly*, By the ſame Faculty and Celerity of Action, it inſtantaneouſly conſumes and takes down to the very Roots, ſuperfluous Excreſcences of what ſort ſoever, and that more gently, ſafely, and ſpeedily, than can be effected by the potential Tribe. 4*thly*, As the ignited Inſtrument carries only a ſimple elementary Heat along with it, which, as *Vigo* ſaith, hurteth not afterward, if moderately uſed; it is for that Reaſon more proper and effectual in eradicating cancerous Affects, that commonly are exaſperated, and rendered more indomitable by the uſe of cauſtick Medicines. 5*thly*, The Cautery moſt powerfully attracts by its actual Heat, and thereby calls out morbifick Matter, obtunds and deſtroys its Virulency, and by locking up the Pores and Paſſages intercepts its further Progreſs into the Body. Hence in venomous Bites, malign Abſceſſes, *&c.* 'tis always

way accounted the only Remedy. Laſtly, and generally, in all other Caſes, where a ſuperfluous, corroſive or malign Humour, requires to be exhaled and dry'd up, the Tone of the Part corrobated, or its languid Heat cheriſhed, the actual Cautery is to be preferr'd.

But on the other hand, for the opening of Abſceſſes and Fontanels, the Caſe is quite different; and thoſe very Virtues of the former, will here be found rather detrimental: As *1ſt*, The Apertion made by the medicinal Cautery is uſually much larger than can be expected from the inſtrumental; and therefore a greater Diſcharge muſt conſequently fall in Courſe, whereby we obviate the antient Inconvenience of having too many of theſe Emiſſaries or Sluices running at once. *2dly*, The potential Cautery being a ſaline Compoſition, that wholly diſſolves and melts away in the Operation, diſpoſeth the Part rather to Humidity than otherwiſe, which the actual Cautery cannot do, being of a different Nature and Quality; and conſequently not ſo proper in theſe Caſes, eſpecially in Fontanels, that always require to be kept humid. *3dly*, The cauſtick Stone is allow'd by ſome to act more painfully; and if ſo, muſt neceſſarily attract a greater Afflux of Humours; a Circumſtance very requiſite in Iſſues, being appointed for that End: And for that Reaſon, whatever procures a plentiful Diſcharge, ſatisfies the whole Deſign. *4thly*, Practitioners generally affirm, that the potential Cautery debilitates the Member, whereby it will be render'd more capable of receiving Deflux-

Defluxions; whereas the actual Cautery puts it in a contrary Capacity and Diſpoſition, and by that Means thwarts the main Intention. *Laſtly*, Theſe medicinal Compoſitions exhibit no form of Terrour to frighten the timorous Patient with; whereas the glowing Inſtrument looks ſo ſhocking and formidable, as even to ſtrike a pannick Fear in the Mind of the moſt brave: And hence it is, that this moſt admirable of all Remedies, the hot Iron, can ſcarce, without the greateſt Difficulty and Reluctancy, obtain a Place in Practice, even in the moſt imminent Danger, although its Effects be far more ſpeedy, ſafe, and gentle, than any of the potential Claſs; and, except in ſome few particular Caſes, the actual Cautery for its Efficacy and Goodneſs, ſhall above all others have the Preference in my Eſteem and Practice; being (as *Albucaſis* and *Avicenna* have in its Commendations juſtly term'd it) a truly praiſe-worthy and moſt noble Remedy.

CHAP. XV.

Of Revulſion *and* Derivation.

AMONGST all the various Intentions that Art hath contrived for the Recovery of Health, and Welfare of the Patient, there is none more conducive and beneficial (when rightly and duly performed) than theſe we are about to treat of, which before the Doctrine of the Circulation commenced, were held in ſo great Eſteem by all

all the Practitioners of Phyſick, that they look'd upon them as the ſole Hinge whereon Life or Death depended: But ſince the ſaid Diſcovery came to Light, this uſeful and neceſſary Practice hath daily fallen into Neglect; ſo that one would think the circulatory Motion of the Fluids only took Date from the Time our illuſtrious Countreyman Dr. *Harvey* publiſhed the Invention; for otherwiſe this antient Method, if ſerviceable aforetime, would ſtill hold good, and bear the ſame Weight and Validity it did in former Ages, if, according to the Law of Nature, the Humours be allowed to keep the ſame progreſſive Courſe and Tenour they did then; which doubtleſs muſt be granted; and if ſo, it muſt neceſſarily follow, that the Effects and Conſequences of theſe Diſcharges will equally be the ſame they were of old, as often as the like Method is duly executed or put in practice; and therefore I would adviſe the young and unexperienced to have a diligent Regard hereto, (as a Matter of the utmoſt Moment:) and duly conſider where and in what Place the Evacuation may be performed with the beſt Succeſs. Whether a remote, an adjoyning, or the Part it ſelf, will be moſt ſuitable; for there is a great Difference in reſpect of Places. Some being common to many Affects, and others peculiar and proper only to a few, and ſo belong to different Intentions, and for that reaſon have different Denominations aſſigned them.

The firſt and principal, called Revulſion, takes Place in the firſt Stadium of a Fluxion, with a Deſign

Deſign of revelling or turning aſide the Courſe of the Humours, from an affected to a contrary and remote Part, with much the ſame View that Intercipients or Defenſatives are applied to reſiſt and break off the Impetus of the Fluids in the primary Inſult of a Tumour.

The Second is termed Derivation, which in a right Procedure is always poſtponed to the former, being made nearer the Seat of the Diſeaſe, in hopes of drawing off the Relicts of the offending Matter, while as yet the Malady is recent, and the Obſtruction capable of being ſhook looſe and waſh'd away into the refluent and larger Canals, by Means of the encreaſed Velocity of the Blood's Motion, made in the neighbouring and adjoyning Veſſels: Correſponding in ſome Meaſure to Diſcuſſion in reſpect of Time and Uſe, being equally appointed to ſet open the obſtructed *Tubuli*, (though by different Means) whilſt the Matter is ſuppoſed partly *in fieri*, and partly *in facto*.

The Third and Laſt, having no Dependance hereon, is called a ſimple and abſolute Evacuation; alluding to the laſt Intention of Abſceſſes, wherein we evacuate from the Part affected, as we do here in ſeveral Caſes; for if the Ventricle or Inteſtines be burthened and moleſted with vitious Contents, then proper Diſcharges made by thoſe Parts, as Vomiting, Purging, *&c.* do the Deed: And in general Affects, where the whole Syſtem labours under a plethorick Diſpoſition, and the emptying of the Veſſels be the ſole Deſign, open what Vein you will, the Inten-

tion is ſatisfy'd: But when an Inflammation, or Obſtruction threatens ſome principal Organ, or hath actually ſeized upon ſome particular Part, the Caſe is otherwiſe, and requires a different Management; not in reſpect of the Choice of Veſſels, in one and the ſame Member, for they are equal, but in regard of different Places and Regions of the Body, wherefrom the Evacuation is to be made; which, by the general Conſent of Phyſicians, is alway (in acute Diſeaſes) begun with Revulſion, as lately hath been ſhewed, and farther is confirmed by *Galen*, *Lib.* 2. *De Arte Curat. ad Glauc. cap.* 7. ſaying; *Influentium igitur adhuc humorum, retractio, eorum qui jam partem obſedere, derivatio medela eſt:* The Reaſon whereof is obvious and plain enough: For to evacuate near the Part affected, before univerſal Revulſion had been premiſed at due Diſtance, would be to invite, or rather tumultuouſly puſh the effervescent Blood upon the diſeaſed Member, and by that Means increaſe the Inflammation and Obſtruction: Hence ſaith the Precept, whilſt the Humours are in Fluxion, they are to be revell'd and drawn off by a diſtant and remote Part; in order to abate the Quantity, Heat, and Impulſe of the Fluids, that primarily occaſion'd the preternatural Diſtention of the Solids, and the Obſtruction of their Contents; which being thus partly removed, and the Fibres recovering their natural Tone and Elaſticity, the Reſidue may more eaſily be expell'd, and driven out by the ſucceeding Derivation, made in the neareſt and common Veins, as *Galen* is pleaſed to call them

(in

in *Lib. De Conſtit. Art. Med.*) from which he ſaith the beſt and moſt effectual Evacuation is then performed, on Account of the Communication and Rectitude of Fibres they have with the diſeaſed Part: To which the *Greek* Phyſicians had ſo great Regard, that they ſtrictly commanded this Rectitude and Community of Parts to be obſerved in all theſe Evacuations, looking upon them, whether effected by Art or Nature, as moſt proſperous and ſucceſsful. Whence the recited Author, ſpeaking of the critical Effuſions of Blood in his moſt accurate Book, *De Criſib.* delivers himſelf after this Manner: *Oportet autem* (ſays he) *Sanguinem recto curſu fluere; ex dextra quidem nare, propter hepar, & ea quæ ſub dextro hypochondrio ſunt; ex ſiniſtra autem propter lienem & partes vicinas:* Intimating, that theſe critical Diſcharges made in a right Courſe, were always a Prognoſtick of future Safety. Of the ſame Opinion was *Hippocrates, Epidem.* 6. *part.* 2. *Context.* 12. where he ſpeaks to the ſame Effect: And therefore in Pleuriſies, and the like inflammatory Diſtempers, theſe worthy Men, in Imitation of Nature's Method, inſtituted Veneſection to be performed on the ſame ſide with the grieved Part: For Example, in an Inflammation of the *Pleura*, or intercoſtal Muſcles on the right ſide, they open'd the *Vena Baſilica* of the ſame Arm, becauſe of the Rectitude and Communication they ſuppoſed that Veſſel to have with the ſaid Parts, and thereby not only more powerful to revel, but alſo derive and evacuate the conjunct Matter of the Diſeaſe more ſpeedily and

ſucceſsfully than from the oppoſite ſide; as *Anton. Valetius in Exercit. Hollerii, cap.* 26. *de Pleuritide* from *Galen* hath obſerved; who in *Lib. de Curand. ratione, cap.* 15. expreſly declares, that Revulſion being made in a direct, or ſtreight Courſe (with the affected Member) affords an evident and ſpeedy Help; but not ſo from the contrary; which at beſt is either very obſcure, or long protracted. Whence *Fernelius* (together with ſeveral other eminent and learned Profeſſors) declaring in Favour of this Doctrine, after many ſtrong Arguments to ſupport its Credit, at laſt induceth this, as moſt powerful and perſuaſive: Telling us, that hereby we ſhall rationally both imitate Nature, and the great *Hippocrates*; who, in a Pleuriſie of the right ſide, commands the *Vena Baſilica*, or inner Vein of the ſame Arm to be open'd, and that not only in the aforeſaid Caſe, but alſo in an Inflammation of the Liver; and therefore looks upon the contrary Practice as a great Diſturbance and Violation of Nature, concluding in theſe Words of *Galen*; *Itaque* (ſays he) *revulſio è directo evidens ſubſidium celeriter adfert, è tranſverſo nullum.*

Notwithſtanding *Avicenna* and the reſt of the *Arabian* Phyſicians with their Followers, being not well ſatisfied how the Revulſion and Derivation could be effected from one and the ſame Veſſel (however advantageous in Situation;) and doubting of the Efficacy of this Practice in acute and dangerous Diſeaſes, appointed Revulſion to be performed in a diſtant and remote Place, and for the moſt part on the contrary ſide; and that alway

alway before Derivation; not improperly ſurmiſing that to open a Vein ſo nearly ſituate, and in Community with the obſtructed and inflamed Part, is in Effect to poſtpone Revulſion to Derivation, and by that Means call down the Humours with greater Impetus and Violence upon the affected Member, whereto already they have too great Tendency, eſpecially in plethorick Habits, in which Caſe by the 95. *Art. Med.* we are forbid to evacuate by the Part affected; and to the like Effect the ſame Author, *Lib.* 13. *Meth. cap.* 13. ſays, *Longiſſimè à tentata fluxione parte quod redundat revellere, nequaquam ad eam trahere, convenit*; from whence it is manifeſt, that *Galen* did not deſign to eſtabliſh the former Method into a ſtated Axiom or general Rule without Exception, but only to be of Force and Service upon ſome particular Occaſions, where there is Danger of drawing the noxious Humour inward upon ſome more principal Viſcus, or that the Matter is too pertinaciouſly infix'd in the Veſſel to be carried off by ſo diſtant an Evacuation; for otherwiſe we ſhould not find him ſo frequently inculcating the contrary: As even *Hippocrates* himſelf does, when in his Book *De naturâ oſſium*, he ſaith, that Veneſection is to be made far from the pain'd and obſtructed Place. And *Paulus*, *Lib.* 6. *cap.* 40. goes yet farther, commanding the Revulſion to be perform'd on the contrary Side, when the Inflammation is recent, and the Obſtruction partial: But on the other hand, when the Diſeaſe is more confirm'd, the ſaid experienc'd Author appoints the neighbouring Parts as moſt proper for the

Diſcharge. And therefore *Avicenna*, *Lib.* 3. *Fen.* 10. *Tract.* 5. *cap.* 1. in Pleuriſies and other Inflammations of the internal *Viſcera*, very prudently order'd the *Saphœna* of the ſame ſide to be firſt opened, and then afterward the *Mediana* of the contrary Arm; and laſtly, the *Vena Baſilica* on the oppoſite (or that correſponding with the Part affected:) The firſt with an Intent of revelling or drawing down the Courſe of the Humours to the lower Parts, which in all Affects of the like kind is doubtleſs the beſt Method, and ought never to be omitted in Diſeaſes of the *Thorax*; for thereby the Blood is more plentifully allur'd and carry'd down the deſcending Branch of the *Aorta*, whence neceſſarily a ſmaller Portion than uſual will flow up by the aſcending Trunk to the upper Parts, and conſequently therein will be the leaſt Velocity and Diſtention; whereby the *Pabulum* or *Fomes* of the Diſeaſe being thus cut off, and the Arteries contracting with greater Force and Celerity than before (by reaſon of the Quantity and Preſſure of the Fluids being diminiſhed,) a fair Chance is offered for removing and taking away the conjunct Cauſe or Matter of the Diſeaſe, or at leaſt ſo far promoting it, as by the ſucceeding Evacuations to be wholly extirpated; yet as in theſe internal Inflammations of the reſpiratory Organs, the Obſtruction of the ſmall Veſſels is frequently very pertinacious, and of dangerous Conſequence, wherein no Time is allow'd for Truce, the aforeſaid Author, like a true Practitioner, revels now from the contrary Side, endeavouring ſtill to avert the Current of the Blood

from

from the Part inflamed, and farther alſo to abate the Plethora and Heat of the Humours, having the Authority of *Aetius* for his Warrant, who in *Tetrabibl.* 2. *Serm.* 4. *cap.* 68. ſpeaks to this Effect: *In his verò* (ſays he) *qui acuto morbo infeſtantur, ſiquidem circa mammas ac claviculam hæret dolor, venam incidere oportet in brachio, non eo, quod rectà ab inflammato latere procedit, ſed oppoſito:* And laſtly, by reaſon of the Obſtruction yet remaining in the Place, that nothing might be left undone, or in an imperfect Manner, he proceeds in a regular Order to the latter Intention, with a Deſign of drawing off the conjunct and impacted Matter by Derivation made in a neighbouring Part, commanding the *Vena Baſilica* of the ſame ſide with the Affect to be open'd, whereby the antecedent Blood being taken away, and the Veſſels now ſufficiently unloaded and eaſed of the ſuperfluous Burthen, the ſubſequent Humours will have more Space to move in, and the Solids likewiſe more Liberty allow'd to perform their neceſſary Vibrations and Contractions; by which the ſizy Juices will be ſhook looſe, and ſwept away into the common Current.

Thus this ancient Author, who liv'd ſome hundred Years before the Diſcovery of the Circulation, hath notwithſtanding laid down a rational and regular Practice that ought alway diligently to be attended to, eſpecially in theſe and the like inflammatory Diſtempers; wherein I have frequently taken notice, that Revulſion made in a diſtant Region, whether by Bleeding, Cupping, Bliſtering, *&c.* hath alway had a better Effect,

than when perform'd near at hand: And this is evident from the celebrated and noted Efficacy of Veſicatories applied to the Legs in Diſeaſes of the *Thorax*; which in a Pleuriſy generally do more Good than all the other Helps that Art hath produced. Whence we may rationally infer, that Veneſection made in thē lower Parts, according to the Appointment of our Author, would be equally available, not only in the recited Affects, but alſo in many other cephalick Caſes: As appears from the Teſtimony of *Alex. Trallianus*, *Paulus*, and *Avicenna*, who with this View of making a more powerful and durable Revulſion, order'd a Vein to be open'd in the Foot, for reſtraining a violent Hæmorrhage at the Noſtrils. And hence aroſe the fam'd Succeſs of Cupping-Glaſſes applied to the Feet in the ſame Diſtemper, recorded by *Foreſtus* in his Obſervations. And hitherto is likewiſe owing the good Succeſs of *Oribaſius*, who being taken ill of a peſtilential Fever that then raged in *Aſia*, on the ſecond Day of the Diſeaſe (the Fever remitting) he ſcarified his Leg (in order to evacuate and revel the Humours from the ſuperiour and principal Parts) and drew away two Pound of Blood, whereby he entirely recover'd; together with many more that uſed the ſame Method (*Collect. 7. cap.* 20.) Whereupon *Horatius Augenius*, in his Epiſtle to *Hieronym. Vitelleſc. Tom.* 2. treating upon this Subject, and having this Example in his Eye, delivers this Precept by way of Caution and Confirmation; *Illa certè* (ſays he, *viz. ſcarificatio) quæ fit ad malleolos in febribus peſtiferis longe tutior eſt*;

quæ

quæ ſit in dorſo longe periculoſior. For in this dangerous and dreadful Malady, the Heart and Brain (the moſt noble and principal Viſcera of the Body) are generally firſt attack'd, and ſuffer moſt under the Inſults of the malign Particles or venenate Atoms, lodg'd in the Maſs of Blood, and therefore theſe experienc'd Authors have appointed the lower and remoteſt Parts for their Diſcharge, which in a nearer Place, cou'd not ſo ſafely be effected, by reaſon of the Vicinity of the aforeſaid Organs, whereto the malign Matter might probably recur, or be attracted in greater Quantity than could be expell'd or thrown out; and ſo endanger, if not inevitably ſubject the animal Oeconomy to Deſtruction, as *Aetius, Tetrabibl.* 1. *Serm.* 3. *cap.* 20. hath obſerv'd, that Suffocation and Death hath on the ſame Day been the Iſſue of ſuch Proceedings.

Through Fear of which Accidents, *Galen, Lib. De Hirudinib. cap.* 2. orders the Revulſion to be made in Parts far diſtant and contrary: And even in chronical Affects, where the *Occaſio præceps* is not ſo very urging, we find the ſame Practice ſtill of Force. 'Twas upon this Conſideration that *Rhaſis,* after he had recommended Vomiting as a moſt effectual Remedy in a Sciatica, puts in a Caveat againſt Purging, before the other had been duly premis'd; and in Arthritick Caſes, where a Retraction or Tranſlation of the gouty Humour from the extreme Parts is by ſeveral Practitioners no leſs dreaded than the Plague it ſelf; *Charles Piſo,* that moſt excellent Phyſician of *Lorrain,* ſetting aſide all Doubts and ſcrupulous Fears,

Fears, boldly affirmeth, that a liberal Revulſion by bleeding in the Side oppoſite to the pained Member, is very neceſſary for repreſſing and bridling the Orgaſm of the Humours, and appeaſing the Vehemency of the Pain: Neither is there any Fear of incurring a new Fluxion by this Method; for that (ſaith he) is averted and taken away by the large Quantity of Blood drawn off; which being made in Proportion to the Plethora, whether *è directo vel tranſverſa*, provided it be done according to the Text of *Hippocrates*, *Ut quam longiſſime à locis ubi dolor eſt, & ſanguis cogi ſolet*; is by *Galen* accounted a preſent Remedy in all moſt vehement and grievous Dolors; who in *Lib. De Curand. ratione per Sang. miſſionem, cap.* 19. with the ſame View of averting the Fluxion from the depending and inferior Parts, orders a Vein in the Arm to be open'd for the Cure of the ſame Diſtemper.

From all which Caſes and Authorities it is manifeſt, that this Doctrine (as a very good Judge informs us) is grounded upon a good Foundation, and hath as great Reaſon to ſupport it, as the other. A very pertinent Hiſtory in Confirmation hereof, is thus related by *Lindanus*, if we may rely upon his Authority. "A Surgeon (ſaith he) "of *Amſterdam* was ſeiz'd with an Inflammation "in his Right Eye; he ſent for ſome old Phyſi- "cian, who order'd him to be let Blood in the "Right Arm, whereupon the Inflammation ſen- "ſibly increas'd: The next Day the Doctor was "conſulted again, and he, to mend the Matter, "commanded him to be let Blood in the Left "Arm,

" Arm, the Conſequence whereof was, that his " Left Eye was inflam'd, though formerly un- " touch'd. The third Day the old Gentleman " perſiſting ſtifly in his wonted Courſe, preſcrib'd " Veneſection in the Right Arm again, the Per- " formance of which made him quite blind in his " Right Eye: And afterwards, to make all Odds " even, he was blooded again in the Left Arm, " which heighten'd the Inflammation of his Left " Eye to the laſt Degree. In this Extremity he " ſent for a more ſkilful Practitioner, who only " let him Blood in the Foot, and the Inflamma- " tion immediately began to aſſwage." The Reaſon of this Miſcarriage, is very pertinently deſcrib'd by *Etmuller*; who tells us, that the Quantity of Blood being not diminiſh'd, and a Door being open'd to it in the Arm, will naturally crowd upwards, where meeting with Obſtructions in the Paſſages, it cannot but accumulate and augment the Inflammation. A Revulſion in the oppoſite Region of the Body, ought to have uſhered it in, which wou'd have prevented all the Inconveniencies that are ſaid to have happen'd: Therefore this noted Practitioner treading in the Steps of *Avicenna*, in the Cure of a Quinſy, ſaith, " We muſt firſt make a general Revulſion by " bleeding in the Foot, to avert the whole Maſs " of Blood from feeding the Inflammation; " then for a more particular Revulſion, we bleed " in the Arm, in order to draw off the obſtruc- " ting Humours through a neighbouring Chan- " nel; and if this does not quite take off the In- " flammation, we open a Vein under the Tongue,

" in

" in order to diſengage and evacuate the ſtag-
" nant Blood that ought naturally to paſs that
" Way. And in this Senſe all theſe celebrated
" Effects of Veneſection, are very conſiſtent with
" the Rules of Circulation. But (continues he)
" the univerſal Revulſion muſt alway lead the
" Van, for fear a particular one ſhould increaſe
" the Inflammation, by inviting the Blood to
" the adjacent Parts." And this truly is the Reaſon that (through want of a due Obſervance of this Doctrine) ſo many Miſcarriages occur in Practice; eſpecially in the Hands of the Ignorant, who vainly ſurmiſe, that the Diſcovery of the Circulation hath quite ſuperſeded and overthrown all thoſe Rules the Ancients with ſo great Wiſdom and Induſtry had laid down for this Intention; and for that Reaſon make no Scruple of opening the firſt and faireſt Veſſel that preſents it ſelf to View. But the Error of this pernicious Treatment is fully detected and confuted by the ill Succeſs of ſuch Undertakings.

'Tis what *Matth. Curtius*, a learned Phyſician, and a zealous Oppugner of this Method, was oblig'd to have recourſe to when taken ill of a Pleuriſy. He found his Heart fail, and choſe rather to act contrary to his own Notions and Writings, than not ſave his Life by the *Arabian* Practice; as probably many others covertly have done, whilſt the Feud laſted between the two contending Parties; which however ſeemingly reconcil'd, yet the major and more learned Part do ſtill adhere to the one or the other Side; but the Levellers being ſupported betwixt them, make no choice

choice of Veſſels; but going on in their own Courſe, firſt begin with Derivation, and then with Revulſion, which they act over and over, until at laſt, if the Patient happen to recover, 'tis more owing to the liberal Evacuation, than the Skill of the Undertaker: Whereas if the Party had been rightly manag'd, twelve Ounces of Blood artfully drawn off, would do more Service than thirty Ounces after a prepoſterous Method; as by frequent Experience I've obſerv'd to be true, and for that Reaſon can ſpeak in Behalf of a Doctrine whereto the greateſt Authorities have ſubſcrib'd, even the *Greek* Phyſicians themſelves, without any Contradiction or Repugnancy to the Laws of Rectitude. For as all other Intentions vary, according as different Circumſtances occur, ſo in like manner muſt the ſame be expected here, *i. e.* in reſpect of the Fluxion and State of the Diſeaſe, which principally is to be regarded: And as the Matter is *in fieri vel facto*, a more near or diſtant Place is indicated for the Diſcharge, and that either in a direct or tranſverſe Station, as the Nature and Seat of the Inflammation and Obſtruction ſhall ſeem to require; whereof we have ſufficiently ſpoken already, and therein explain'd when and where Revulſion is moſt ſerviceable, as likewiſe the ſucceeding Derivation, which, for a Concluſion, we ſhall ſum up in that excellent Sentence of *Galen*, 4 *Meth.* 6. ſaying, *Si jamjam valide fluxio irruit, revellere ad contraria ſtudebimus; ita in ſuperioribus partibus (ulcus conſtiterit) per inferna purgabimus; ſi enim in inferioribus, ſurſum Vomitum movebimus; at ſi jam fluxio reſtitit membro-*

que

quæ materia inhæſit, derivare per vicina magis expedit; nam materia in propinqua facilius traducitur, & remedium facilius ex vicinis influxum humorem evocat.

The Cautions attending theſe Diſcharges, may be collected from the foregoing, as far as they relate to Veneſection; and as for the other Inſtruments appropriated for this Uſe, ſuch as Cupping Glaſſes, Veſicatories, Ligatures, Fontanells, Setons, and the like dolorifick Remedies, that powerfully attract by virtue of the ſaid Senſations, a general Evacuation (if the Caſe will allow) ought alway to precede the Uſe of theſe in plethorick and cacochymick Habits, according to the good Advice of *Guido*; who ſaith, that an univerſal Evacuation muſt always go before a particular one, in a right Order of Operation, leſt otherwiſe a greater Fluxion be brought upon the Part than can be diſcharg'd thereby, and ſo conſequently diſpoſe the ſame to ſome ſudden and great Calamity; ſuch as *Lanfrank* takes Notice of *Tract. 3. Doct. 3. cap.* 18. ſaying, "I have ſeen many who "being full of Humours, have made an Iſſue un- "der the Knee, before due Purgation had been "premis'd; whence, by reaſon of the too great "Defluxion of Humours, the Legs tumified, ſo "that the cauterized Place corrupted, and a "Cancer (or rather cacoethic Ulcer) was thereby "made, which with great Difficulty was cur'd." And to the ſame Effect ſpeaks *Galen*, 11 *Therapeut.* 15. ſaying, "The Methodiſts ſlew many by "the Application of Cataplaſms, and the like to- "pical Medicaments, before due Evacuation "and Revulſion had been adminiſter'd." Therefore

fore I ſhall conclude this Work in the Words of an eminent Practitioner, who gives this Caution to be obſerv'd as a general Axiom in the Uſe of Derivation; *viz.* that we never go about this particular Curation, before a general Proviſion for the whole Body hath firſt been made; for until that be done, the other has no Place.

The End of the FIRST BOOK.

CHIRUR-

BOOKS publiſh'd by the Author of this Book.

A Compleat Body of Diſtilling, explaining the Myſteries of that Science, in a moſt eaſy and familiar Manner; containing an exact and accurate Method of making all the Compound Cordial Waters now in Uſe, with a particular Account of their ſeveral Virtues. As alſo a Directory conſiſting of all the Inſtructions neceſſary for learning the Diſtiller's Art; with a Computation of the original Coſt of the ſeveral Ingredients, and the Profits ariſing in Sale. Adapted no leſs to the Uſe of private Families, than of Apothecaries and Diſtillers. In Two Parts. The Second Edition.

The Nature of Fermentation explain'd; with the Method of opening the Body of any Grain or Vegetable Subject, ſo as to obtain from it a ſpirituous Liquor. Exemplified by the Proceſs of preparing Rum, as 'tis manag'd in the *Weſt-Indies*. With many other uſeful Reflections and Obſervations. To which is added, a Collection of ſeveral compound Cordial Waters; with the Art of preparing ſome artificial Wines, not hitherto publiſh'd. By Way of Appendix to the Compleat Body of Diſtilling. Price 1*s*.

CHIRURGICAL INSTITUTIONS, &c.

BOOK II.

Antimonial Æthiops.

TAKE Æthiops Mineral (prepared with a double Quantity of Quick-ſilver) four Ounces; Crude Antimony in ſubtil Powder eight Ounces; grind them together in a Marble or Glaſs Mortar until they become an impalpable Powder, which reſerve for Uſe.

Cinnabrine Æthiops.

Take Æthiops Mineral (prepar'd with Mercury and Sulphur, each equal Parts) four Ounces,

factitious or Antimonial Cinnabar finely levigated ſix Ounces; grind them as above directed, until the whole be perfectly commix'd and united; then put it up in a Phiol cloſe ſtopp'd, for the ſame Uſes.

Both theſe Preparations are of approved Efficacy in all cutaneous Diſtempers, ariſing from a viſcid or ſaline Lympha, being excellently adapted to break and divide the Compoſt of the Humours, diſſolve the ſizy Juices, and make way for a liberal and free Tranſpiration, by opening and cleanſing the miliary Glandules from their Infarctions, and ſo becomes ſerviceable in ſeveral inveterate and chronical Affects. The ſpecifick Gravity of theſe Compoſitions being in a triplicate Proportion to that of the Humours, and the *Momentum* thereof correſponding, muſt neceſſarily, with the augmented Velocity of the Fluids (an inſeparable Concomitant to mercurial Remedies, when admitted into the Body) be able to o'ercome any Reſiſtance that may occur in the evaneſcent Arteries or their Glandules, and further attenuate and comminute the ſame to ſuch a ſuitable Degree of Fluidity, as to be capable of paſſing off by the ſecretory Organs, and thereby free the Body of thoſe ſaline-ſulphureous Combinations, which ſtagnating near the Surface of the Cutis, produce the common Affects or Diſorders of that Part, ſuch as Scabs, Itch, Leproſy, ſcorbutick Eruptions, venereal Efflorеſcences, ſcrophulous Tubercles, and the like Defedations: Againſt which no better Remedy can be found,

if

if common Experience may be credited, and the Authority of a very ingenious and learned Author, who aſſures us that the Blood aſſiſted by any conſiderable Quantity of Mercury, will do as much in the Removal of Obſtructions in one Day, as the Blood unaſſiſted (by ſuch Helps) in three Years: And if ſo, the Aſſertion of thoſe, who affirm theſe and the like fix'd Medicaments to paſs no further than the *primæ viæ*, as incapable of Diſſolution (and therefore ſuppoſe them to run off by the inteſtinal Diſcharges untouch'd) is of no Force, and is fully invalidated by the aforeſaid acute Practitioner, who from his own proper Experience, gives us an Hiſtory of a large annual ſcorbutick Ulcer, cured by repeated Doſes of the Æthiops Mineral *per ſe*, which being pretty liberally taken for a long Time together, the Body being ſaturated therewith, the Æthiops at laſt forced its Way through the ſound Part, and lay in its own proper Subſtance and Colour about the Margins of the Ulcer and Parts adjacent. A Teſtimony ſufficient to prove that theſe indiſſoluble Subſtances have an Admittance into the Maſs of Blood, and thereby an Opportunity of permeating the minuteſt Canals and Paſſages of the Body. But by what Courſe, or after what Manner they paſs from the Inteſtines, whether in their own Form and Subſtance, thro' the Lacteals, or they take ſome other more direct and latent Paſſage, yet unknown, or otherwiſe, during the Concoction, they aſſume a Tincture-like Form by virtue of the *fermentum ventriculi fuſorium*, advanced by the famous Dr. *Gliſ-*

ſon, and ſo enter among the Fluids, is what I cannot determine: For I have long doubted about this Matter, and could not conceive how the *Mercur. dulc.* and the like ponderous Bodies (when moſt finely pulverized) can be thrown off from the villous Tunic or pluſhy Lining of the Ventricle, and after climb over the Pylorus, and with the chylous Juice enter the inconſpicuous Pores and intricate Inſertions of the Lacteals, and therewith paſs along through the ſeveral Strainers of the Meſentery; and laſtly, mount up the ſteep Aſcent of the Thoracic Duct into the Subclavian, without obſtructing in their Paſſage: And yet practical Experience demonſtrated from the Effects, tells us the ſame is true (in relation to their Admittance into the Blood, and thence into the Habit of the Body.) But after what Manner the firſt is effected, is left for Anatomy to diſcover, and the Learned to inform us; which I find has puzzled ſeveral eminent Practitioners to give a rational Account of: Some attributing the *Vas Breve*, others the *Vena Gaſtrica*, and others ſetting up occult Paſſages for this Work. Yet all ſeem to have fail'd in tracing out thoſe hidden Paths and myſterious Ways of Nature, whereby ſeveral, not only medicinal, but alſo other extraneous Subjects ſwallow'd down, ſuch as Pins, Needles, Bodkins, old Iron, *&c.* have unaccountably, and even miraculouſly been detach'd off thence by ſome peculiar unknown Paſſages to the urinary Bladder and other remote Parts, that could never be ſuppoſed to paſs by the Lacteals: And therefore a nearer Paſſage muſt

neceſ-

neceſſarily be allowed, according to the Sentiment of Dr. *Willis* and ſome other learned Men, who obſerving the quick Deſcent of Liquors from the Ventricle to the Bladder, judg'd it almoſt impoſſible for them to run the long Courſe of Circulation in ſo ſhort a Space of Time. But be this as it will, it matters not, ſeeing we know the Effect; which is all that is required in Practice.

The former of theſe Compoſitions being much cheaper than the other, is calculated merely for the ſake of the Poor, where a large Quantity of the Æthiops is required to depurate the Maſs of Blood, as in cacochymick and ſcrophulous Habits; one Dram of it may be exhibited twice or thrice a Day, in any convenient Vehicle, for a conſiderable Time together, without any Danger of exciting a Ptyaliſm or Spitting.

The latter having the Cinnabar conjoyned hath much the Advantage in this Reſpect, being a moſt excellent Anodyne, that will abate the vagous nocturnal Pains of the Lues, much ſooner and more effectually than the moſt famed Opiats, as I've often obſerv'd; and the like may probably be expected in ſcorbutick, rheumatick, and other erratick Dolours; which is of no ſmall piece of Service, to have a Remedy, that at one and the ſame Time will mitigate and take off one of the moſt vehement Symptoms, whilſt it is eradicating the very Eſſence and Cauſe of the Diſtemper.

Arcanum Coralinum dulcified.

Take Mercury precipitate two Ounces; grind it in a Glaſs Mortar to a moſt ſubtil Powder, put it into a Glaſs Body, and affuſe thereon a Quart of ſtrong Lime-water, let it ſtand in a warm Place for twenty-four Hours (now and then ſhaking the Veſſel;) decant off the clear Liquor, and dry the Powder very well before the Fire; laſtly, put it into a clean Earthen Pot, and pour upon it as much rectify'd Spirit of Wine as will o'ertop it two or three Finger's Breadth; ſet it on fire with a lighted Paper, and let it burn away to Dryneſs; reiterate the Deflagration with freſh Spirit to three or four Times more, until the acid ſaline Spiculæ be evaporated and burnt off, and the Medicament thereby becomes edulcorated and render'd fit for internal Uſes.

There are ſeveral other Proceſſes hereof, but none ſo compendious and eaſy to be prepar'd; neither any ſo well corrected as the foregoing, being wholly diveſted of all thoſe acrimonious Particles that uſually render the common Arcanum ſo rough and churliſh: And this is owing chiefly to the preceding Digeſtion of the Powder in the alkaline Lixivium, whoſe Efficacy is ſo extenſive this way, as even to infringe and bridle the cauſtick Salts of the corroſive Sublimate, tranſmuting its Form and Nature from a deadly and deſtructive Quality, to a ſafe, mild, and uſe-

ful

ful Remedy. The ſame good Office it imparts to this our Compoſition, where it may be ſaid to contribute more towards obtunding and ſheathing the Aſperity of the pointed cutting Salts, than all the reſt of the Proceſs put together; the latter part of it ſeeming chiefly deſign'd to exterminate the Reſidue of the malign (and perhaps ſulphureous) Particles that might elude the Efficacy of the alkaline Menſtruum, and lie inherent in the Subject, until extracted by the Spirit, and therewith evaporated in the Deflagration; which being perform'd, we obtain a Remedy equivalent in all reſpects to the *Turp. miner.* of the Shops, whereto it may come in as a Succedaneum, upon Occaſion, being exhibited in the like Doſe, the Strength of the Body, and Nature of the Diſeaſe being conſider'd; which uſually is given from four, ſix, to eight Grains (or upwards in ſome athletick and robuſt Conſtitutions.) It operates briſkly both upwards and downwards, and therefore is of approved Service in ſeveral chronical and obdurate Affects, eſpecially the *Lues venerea*, when grown inveterate; from whence it hath aſſumed the Title of the *Antiſiphilic Powder*, being accounted a Specifick in that Caſe: And moreover, 'tis alſo ſucceſsfully uſed in rebellious and obſtinate Ulcers of the lower Parts, from which it makes a powerful and ſtrong Revulſion, drawing out the morbifick Humours from their Receſſes, and expelling them by thoſe Paſſages whereto Nature and their own Tendency ſeems moſt inclinable.

The external Uſes are much the ſame with thoſe of the other edulcorated Precipitates, ſerving ſometimes in lieu of the *Merc. Præcipit. alb. &c.* to mix with the pſoric Unguents for cutaneous Diſorders; or in its own proper Subſtance to repreſs the Growth of looſe Fleſh, conſume a ſmall Hyperſarcoſis in feminine and puerile Habits; and in the contrary Subjects, to cicatrize the Surface of an Ulcer. The Lixivium made uſe of in the firſt Part of the Proceſs, may be reſerved as a Subſtitute to the *Aq. Phagæden.* being much of a piece therewith both in Nature, Virtue, and Effect. So that where one of them is of Service, the other cannot be uſed amiſs.

Amalyæma of Quickſilver with Lead.

Take what Quantity you pleaſe of pure Lead; melt it in any proper Veſſel, and when removed from the Fire and a little cool'd, add thereto an equal Quantity of Quickſilver; ſtir the Mixture well together with the ſmall End of a Spatula, and when cool put it by for Uſe.

This Preparation being ſomewhat uncommon to be met with in Surgery, I don't queſtion but ſome will be ready to aſk why I placed it here. The Anſwer is, That it may be in Readineſs, not only to ſupply the Place of the celebrated Mercurial Lamina, ſo much extoll'd by *Ambr. Parey* for cicatrizing and depreſſing the prominent Margins of malign and rebellious Ulcers, but alſo to form the Baſis of many uſeful Compoſitions; which

which by reaſon of its ſoft and tractable Conſiſtence may eaſily be reduced into any Form, whether of a Malagma, Cerote, or an Emplaſter, by the Addition of ſuitable Ingredients: And in its own Body 'tis no very contemptible Medicine, but may be uſed with tolerable Succeſs in the moſt inveterate and contumacious Maladies. The diſcuſſive and reſolving Faculty of the crude Mercury, conjoined with the anodyne and refrigerating Quality of the Lead, enumerates it amongſt the cancerous, ſcrophulous, and venereal Specificks; having this peculiar Advantage above the reſt of the diſcutient Tribe, that it excites no preternatural fermentative Heat, whilſt it is reſolving the indurated Glandules, and diſperſing the offending Contents; and withal (being a ſoft porous and brittle Paſte) 'twill ſit much eaſier, neater, and cloſer upon an aggrieved Part, than can be expected from a hard metalline Plate, or even an Emplaiſter itſelf, which is not wholly exempted from ſome Inconveniencies.

Agglutinative Balſam.

Take Venice Turpentine, Half a Pound; Gum Elemi, four Ounces; Oil of St. John's Wort, three Ounces: Liquify them over a moderate Fire, (and if there be any Droſs in the Gum, run it through a Hair Sieve) adding thereto, Powder of Bole Armoniac and Dragon's Blood, each an Ounce; Aqua Vitæ, two Ounces; Powder of Florentine Orrice, Alloes, Myrrh, Maſtick,

Maſtick, each one Drachm. Mix, and make a Balſam.

This vulnerary Balſam, if made without the Addition of the ſarcotick Powders, is perfectly agglutinating, drying, and conſtringing, and therefore a very ſuitable Dreſſing for all ſimple and recent Wounds attended with no Contuſion, Hæmorrhage, Loſs of Subſtance, or other Accident that may forbid: But when the ſaid Powders are admitted into the Compoſition, it looks rather like a ſarcotick Medicament, than an agglutinative; by reaſon of a moderate Abſtergency reſiding in ſome of thoſe Ingredients: Whence it becomes a very uſeful and ſerviceable Application in large Wounds and Ulcers that require Incarnation. *Ambr. Parey* tells us, he hath done Wonders with it in agglutinating ſimple Wounds, applying over it a Plaiſter of Diachalcit relented in Oil of Roſes and Vinegar, in order to repreſs the Flux of Humours and Inflammation.

Anodyne Arthritick Balſam.

Take Spirit of Wine, twenty Ounces; Camphor, ſix Drams; Saffron, one Dram: Infuſe them ſeven or eight Days, until the Tincture of the Saffron be wholly extracted; then preſs out the Liquor, and mix therewith, Opium cut ſmall, Half an Ounce: Digeſt with a moderate Heat for the ſame Space, ſhaking up the Bottle twice or thrice a Day, in order to haſten the Diſſolution of the Gum; which being effected,

fected, add thereto, Caſtile Soap ſhav'd very thin, one Ounce: Commit it once more to a digeſting Heat, till the Body of the Soap be perfectly diſſolv'd, and the Balſam appear of one homogeneous Form.

This Compoſition (originally taken from *Horſtius*) is a moſt noble diſcuſſive Anodyne, when rightly prepar'd; but if made after the common Manner, by adding all the Ingredients together, the Soap, upon its Diſſolution, will immediately ſo fill up the Body of the Menſtruum, that very little, or nothing material, will be obtain'd from the Opium and Saffron, wherein the main anodyne Quality reſides; and therefore I have choſen to make a ſeparate Infuſion, as moſt likely to extract the Virtues of each Particular in their full Force and Efficacy, which being conjoin'd, affords a moſt ſafe and powerful Remedy, to combat againſt the violenteſt excruciating Dolours, and ſeems to bid as fair for removing the arthritick Paroxyſm, as any that hitherto I have met with, ſaving the fam'd *American* Extract, or the inſpiſſate Juice of the *Weſt Indian* Plant; whoſe Efficacy this Way, hath no Equal, it evidently breathing out the conjunct Cauſe of the Diſeaſe by a liberal Tranſpiration, appearing in the Form of Dew, or Sweat, upon the pained Joint, attended, all the while the ſtimulating Salts are in *Tranſitu*, with a moſt troubleſome, and even intolerable Itching, which ceaſing in a few Hours, carries off therewith the morbifick Humour, leaving the affected Member in a perfect tranquil and eaſy State.

State. But as this grand Specifick is only known to very few in this Nation, being the Product of an exotick Vegetable, imported for private Ends, and therefore ſomewhat ſcarce and difficult to be met with, we muſt reſt contented with ſuch Helps as the Shops afford us; amongſt the great Variety whereof, this camphorated ſaponaceous Laudanum is none of the leaſt conſiderable, poſſeſſing all the Qualities that are requiſite to ſet open the Pores, cleanſe the Paſſages, ſheath the Aſperities of the Salts, appeaſe the Orgaſm of the Spirits, and finally throw off, by a gentle Diaphoreſis, the dolorifick gouty Matter, as may rationally be ſuppos'd, from the conſtituent Materials. The Camphor, a fine, ſubtil, ætherial Body, compos'd of a volatile Salt wrapp'd up in an eſſential Oil, hath a peculiar Property above all others, of permeating the inmoſt Receſſes of the Parts, reſerating the obſtructed Tubes and Glandules, and of rarifying and diſperſing the offending Contents, whilſt its oleous and ſofter Principles guard and preſerve the tender *Fibrillæ* from the too ſenſible Attacks, or violent Irritation of the ſharp-pointed ſaline Atoms, during their Expulſion through the cutaneous Pores: The Soap likewiſe being a ſaline ſulphureous Concrete, form'd of a lixivial Salt, concorporated and united with an oleous or unctuous Matter, comes in, on the ſame Grounds, as a moſt powerful Abſtergent and Diſſolvent; which by its penetrating Faculty, and Tenuity of Parts, is enabled (as the learned Profeſſor *Boerhaave* witneſſeth) to pervade and ſet open the minuteſt Canals of the Body, and there-

in

in diſſolve and ſcour out whatever Concretions it may meet with, although the ſame were even of a gypſeous or tophaceous Nature, (the common Attendant of an inveterate Gout) relaxing and lubricating at the ſame Time with its unctuous Particles, the over-hauled and rigid Fibres, whereto the Opium greatly concurs, not only by obtunding and dulling the Senſe of the Part, rendering the Stimulus leſs perceptible, but alſo by mollifying and demulcing their painful Corrugations, and compoſing the inordinate Motion of the Spirits; the cutaneous Pores in this State of Indolence and Relaxation, being more patent, and the Perſpiration conſequently more liberal and free, if the Aphoriſm of *Sanctorius* ſay true, (6 *Sect.* 4.) that Perſpiration is greater in Reſt, than what is made by Exerciſe; we may thence infer, that the Effect will be proportionable, that is, the noxious Matter will breathe out, and a Ceſſation of the moleſting Symptom, Pain, be the neceſſary Conſequence.

The Manner of Uſe, is to apply double Compreſſes moiſten'd in this Balſam round the affected Joint, covering all the inflamed Parts therewith; renewing the ſame as often as they grow dry, until the Pain ceaſe: Which may likewiſe be extended to ſundry other chronical Affects with the like proſpect of Succeſs; but in phlegmoneous inflammatory Tumours, while the Fluxion is vehement, theſe hot Diſcuſſives have no Place.

The Spaniſh Balſam.

Take pure Wheat, Roots of Valerian and Carduus Benedictus, each one Ounce, Seeds of St. John's-wort two Ounces; bruiſe them well together in a Marble Mortar, and put them into a narrow-mouth'd Earthen Veſſel well glazed, with as much White-wine as will well cover them (*viz.* about a Pint;) ſtop up the Veſſel and place it in a warm digeſting Heat for two Days (ſaith the Preſcript, but twenty-four Hours will be duly ſufficient,) then ſet it over the Fire in a ſuitable Veſſel, and add thereto old Oil three Ounces; boil it gently away till the Wine be wholly conſumed; which done, preſs out the Oil pretty ſtrongly from the Ingredients, and diſſolve therein over a gentle Fire, Frankincenſe powder'd two Ounces, clear Venice Turpentine eight Ounces, mix them well together over the Fire, and when cold put it up for Uſe.

This Balſam is exceedingly commended by *Hieron. Fabrit. ab Aquapend. Pentateuch Chirurg. Lib.* 2. *cap.* 7. *&c.* ſaying, that 'tis a moſt excellent Medicament for all kinds of Wounds, even thoſe of the nervous Parts, which it is ſaid to agglutinate and heal up in twenty-four Hours: And therefore the *Spaniards*, truſting to its Efficacy, would enter the Liſts, and expoſe their Lives to the utmoſt Danger, upon a vain Surmiſe of its curing all Wounds whatever, tho' in themſelves really

really mortal: Upon which Account the Relator informs us, that it was forbid by Edict to be compounded in *Spain.*

The Manner of its Uſe and Application is thus; firſt the Wound is to be waſh'd in White-wine, and then immediately to be anointed with the Balſam warm (or if the Wound be deep, a little of the ſame is to be inſtill'd into the Cavity and Bottom thereof,) after which the Lips are to be brought cloſe together by Ligature, Suture, or the dry Stich, then the adjacent Parts are to be anointed with the Medicine; and laſtly, a Pledget moiſten'd therein is to be applied over the Wound, and upon that another, preſs'd out of rough Wine or Oxycrate, with a Compreſs of dry Lint, and ſuitable Bandage brought over all; this Method, however complicate, will notwithſtanding appear highly rational: As firſt, the Ablution with Wine is deſigned to cleanſe away the heterogenous Bodies that might adhere to the Edges, or be carried into the *ſolutio continui*, and is what *Galen* himſelf approved of, *Meth.* 3. *cap.* 4. ſaying, that Wine is the beſt Medicine for every Ulcer. Secondly, the anointing with warm Balſam, is to mollify the Margins of the neighbouring Parts, in order to render them more yielding and ſtretching for the enſuing Suture; and alſo to preſerve them in their natural Temperature, leſt otherwiſe they ſhould grow hard and turgid by the Annoyance of the external Air: The ſame Reaſon commands ſome Portion of it to be admitted into the Cavity, when deep and large, that the internal Fibres may receive

ceive the Benefit of the ſame Influence. Thirdly, the Conjunction and Retention of the divided Lips is ſo neceſſary a piece of Service, that the Intention of Agglutination could not rightly be perform'd without it. So that *Galen*, in the forecited Place, affirms, that if the Sides of the Wound be duly join'd together, they will cloſe up of themſelves (in one Day, or two at the moſt,) although no other Help was uſed at all. Fourthly, the reiterated Illinition is partly to appeaſe the Dolour cauſed by the Stitches (when the Needles are made uſe of) and alſo to keep the under Pledget dipt in the ſame the longer ſoft and humid, that by reaſon of the liquid Conſiſtence of the Medicament, would be apt to dry and harden too ſoon, and thereby prove ſtiff and troubleſome to the Part affected. Fifthly, the Compreſs or Pledget wrung out of rough Wine, *&c.* ſtands in the Place of a Repellent, to keep off the Fluxion, and ſtrengthen the Tone of the Part by its Coldneſs and Auſterity; and for that Cauſe ought to be larger than the other. And laſtly, for a further Corroboration, the dry Bolſter and Bandage are appointed, to ſecure both the Dreſſing and Lips of the Wound in their due Site and Place, and alſo to reſiſt the Injuries of the external Element, and the Impetus of the Fluids toward the wounded Part.

This Balſam, by the Addition of a little fine Dragon's-blood reduced to a ſubtil Powder, may (in the boiling) be brought to a beautiful red Colour, without any Detriment to the Compoſition; but rather, *è contrà*, an Exaltation of its conglutinative

tinative Virtue, for which Uſe it ſeems chiefly deſign'd; or if we deſire it as a Sarcotick, a ſmall Quantity of Myrrh and Aloes added *pro re natâ* will render it equally ſerviceable to that Deſign.

The Samaritan Balſam.

Take Oil Olive and White-wine, each one Pound; boil them gently together over a clear Fire, until the vinous Humidity be wholly evaporated; and the Balſam will be made.

This liquid oleous Balſam, containing the eſſential Principles of the Wine within its Pores, aſſumes an uncommon Efficacy in the Cure of Wounds and Ulcers by this Conjunction; which is ſo ſingularly extenſive, and beyond what could rationally be expected from ſuch a ſimple Preparation, that it would even induce us to believe the divine Author (with Reverence be it ſpoken) impreſs'd the *Sanative fiat* thereon, when he gave the Command of, *Go, and do thou likewiſe*; for otherwiſe, how ſhall we account, or what Qualities ſhall we have Recourſe to, for thoſe ſurprizing Effects which Monſ. *Belloſte*, a faithful, candid, and judicious Artiſt, hath from his own proper Experience obſerved to ariſe from the Uſe hereof, when all other Remedies fail'd his Expectation: "I have (ſaith he) oft experienced "on many Occaſions in ſeveral Hoſpitals, and "that in very conſiderable Caſes, that after I had "in vain uſed many Remedies authorized by

" Cuſtom, the Balſam deſcribed in Holy Scrip-
" ture has had ſurprizing Effects, and that Mem-
" bers at the point of being cut off, have been
" thereby cured with much Eaſe." But as the Variety of Conſtitutions and Diverſity of wounded Parts, will not alway diſpenſe with the ſame Medicament, though the moſt excellent that Art can contrive, a Neceſſity ariſeth of making ſuch Alterations therein as may be judged moſt proper for the preſent Circumſtance. Hence ſometimes we are obliged to ſubſtitute the *Ol. Roſ. Hyperic.* &c. in lieu of the *Florence* Oil; and the rough *French* Claret, Red Port, or ſharp Rheniſh, inſtead of the ſofter and ſweeter Wines: The Aſtringency in the one recommends it as a ſerviceable Agglutinative; and the Abſtergency in the other as an agreeable Sarcotick, accommodated chiefly to the harder and drier Bodies and Parts thereof, as the foregoing Preſcription is for the more ſoft and humid; whereto 'tis very common to add in the Preparation a due Portion of Honey or Sugar, in order to render the Compoſition more cleanſing and vulnerary, and alſo of ſomewhat a better Conſiſtence; and with the ſame View we uſually commix therewith an equal Quantity of *Liniment. Arcæi* at the Time of Uſe; which is to be poured warm into the Cavity of the Wound or Ulcer (if the ſame do not admit of healing by the firſt Intention,) filling it up with ſoft Pledgets moiſten'd therein; and laſtly, with a ſuitable repelling Plaiſter and convenient Bandage finiſh the reſt of the Dreſſing.

The Compound Samaritan Balſam of our Author is made after this Manner.

Take of *Spaniſh* Wine and Oil of Roſes, each one Pound; boil them together to the Conſumption of the Wine, adding towards the latter End, Sugar-candy and Honey of Violets, each four Ounces; evaporate the reſt of the aqueous Humidity, and when cold put it up for Uſe.

" This for its admirable Virtue (ſaith he) " may be call'd the Balſam of Balſams, being of " an aſtringent ſarcotick Quality, whereby it " incarns, agglutinates, and performs all the In- " tentions of the other, which how common and " ſimple ſoever it may appear, yet had it pro- " duced ſuch Effects in the Hands of any other, " it would doubtleſs have been kept as a great " Secret; and though its Compoſition had been " known to many, yet its Effects and Virtues " would never have been publiſh'd." Thus our Author.

When the former ſimple Balſam is deſign'd to be kept in its own proper Form or liquid Subſtance, 'tis adviſeable to boil ſome Ingredient therein (though only to delude or conceal it from the Eyes of the Vulgar) that may alter the Colour without imparing the Virtue; and this is beſt effected by a premiſed Infuſion of the *Flo. Hyperici* in the Wine, which may be heighten'd, if need be, by an Addition of two or three Drams

of the beſt *Sang. Dracon.* pulverized, and boil'd in the ſame; whereby not only the Colour will be improved and augmented, but alſo the ſarcotick and vulnerary Quality along with it; after a much better Manner than can be expected from the *Rad. Anchus, Santal. rub.* &c. uſed by ſome for theſe Diſguiſes.

Vigo's *Balſam for wounded Nerves.*

Take Oil of Roſes one Ounce and half; Oil of Turpentine three Drams; Juice of Plantain half an Ounce; Seeds of St. John's-wort ſomewhat bruiſed half a Handful; Tutty-ſtone finely levigated three Drams; Lime ten times waſh'd in Plantain-water two Drams; Antimony in Powder one Dram; Goats and Calves Suet, each five Drams; Earth-worms waſh'd in Wine one Ounce and a half: Boil them all together (except the Tutty) with about four Ounces of Barley-water, until the aqueous Humidity be wholly conſumed; then ſtrain off the Liquor from the Ingredients, and ſet it over the Fire again, adding as much white Wax as will give it a due Conſiſtence; and laſtly, with the aforeſaid Tutty, and half a Dram of Saffron pulverized, mix and make a Balſam according to Art.

In the Preparation of this Compoſition, the Calx and Antimony (two indiſſoluble Subſtances) may as well be omitted in the firſt Coction, for any Service they contribute to it, unto the latter

End

End of the Proceſs, wherein they may enter along with the Tutty and Saffron to good Advantage; and if the *Ol. Terebinth.* was likewiſe reſerv'd to that Time, its ætherial and fine ſubtil Parts would be retained, which otherwiſe are in Danger of exhaling or flying off, during the long continu'd boiling of the Medicament, which if rightly prepared is (as its Author teſtifies, *Lib.* 3. *De vulnerib. cap.* 15.) a moſt noble Remedy for all Wounds of the nervous Parts, being of a very anodyne ſarcotick Nature; whereby it appeaſes the Dolour, abſorbs the ichorous Gleet iſſuing from the wounded Nerves and Tendons; and laſtly, incarns or covers them over with new Fleſh: And with a little Judgment, as *Ambr. Parey* from the ſaid Author obſerves, its Uſe may be tranſferred to Punctures of the Membranes, Tendons, and other cold ſimilar Parts, which, as *Avicenna* remarks, will bear ſomewhat a ſtronger Medicament than the nervous Bodies can; and therefore for ſuch the following Green Balſam of *Schroder* ſeems to be very proper.

Take Linſeed Oil, and Oil Olives, each one Pint; Oil of Bays one Ounce; Venice Turpentine two Ounces; liquify them over the Fire, and add thereto, Verdigreaſe in fine Powder three Drams; ſuccotrine Aloes two Drams; white Vitriol two Drams and a half: Mix them together, and when a little cool'd, commix therewith, Oil of Juniper half an Ounce; Oil of Cloves one Dram: Stir them well together, and the Balſam will be made.

This is the Balſam, ſaith Monſ. *Le Clerc*, that hath been ſo much talk'd of at *Paris*, and which many Pretenders to Surgery keep as a great Secret: Being truly a very good Dreſſing for all ſorts of Wounds, whether made by Sword or Gunſhot; if inſtill'd pretty hot into the *ſolutio continui*, as is uſual in theſe Caſes (eſpecially where the ſimilar cold Parts are concern'd,) whereby it will aboliſh the ſenſe of Pain, exſiccate the ſuperfluous Humidity, and afterward deterge, incarn, and cicatrize the Ulcer. The attractive and heating Quality of the chymical Oils, conjoin'd with a ſuitable Abſtergency ariſing from the other Ingredients, recommends it likewiſe as a ſuitable Medicament againſt venomous Bites, malign and fiſtulous Ulcers; but where the Senſe of the Part is very exquiſite, or the Dolour vehement (an inſeparable Attendant to all nervous Affects,) the pungent fiery Particles of the *Ol. Cariophyll.* &c. will rather be apt to excite Pain and other Symptoms than appeaſe them, unleſs the Medicament be applied ſo hot as to act the Part of a Cautery, and thereby deſtroy the Perception of the Organ; according to the Advice of *Paræus*, who in theſe Caſes hath propoſed it as the moſt ready way to cure: Yet where a milder Courſe may be taken, I ſhould rather prefer a ſpeedy Digeſtion of the Humour, by ſubſtituting a proportionate Quantity of Oil of Turpentine in lieu of the Juniper and Cloves, whereto a little Camphor may be added, upon the Account of its drying Faculty. Whence the Compoſition will become much cheaper, and no leſs effectual in Operation, the one

one diſcuſſing and exſiccating the thinner Contents, whilſt the other haſtens forward a ſpeedy Maturation of the groſſer; as is evident from the good Effects of thoſe Remedies that take in a pretty large Quantity of the ſaid Oil; whereof the following is the moſt eminent in Practice.

A green Vulnerary Balſam.

Take Oil of Turpentine, and Linſeed Oil, each half a Pound; Verdigreaſe in fine Powder two Drams: Boil them a little over the Fire; and laſtly, by adding Venice Turpentine two Ounces, make a Balſam.

This is the *Balſ. Sclopetarium* of Dr. *Bates*; whereto I have added the *Terebinth. Venet.* in order to give it a better Conſiſtence, and thereby preſerve the æruginous Particles from ſubſiding, and alſo to contemperate the Acrimony that in ſome Caſes and Subjects might prove too ſharp and ſtimulating; upon which Account ſome Surgeons add a like Quantity of Gum Elemi, with a Deſign of augmenting the ſarcotick Faculty along therewith: But whether it be made with the one or the other, 'tis a moſt excellent Medicine for the Cure of Wounds and Ulcers, of what Sort and Quality ſoever; its Efficacy extending not only to the more ſimple and recent Affects, but alſo to thoſe more complicate or compound; it digeſts, deterges, and incarns with the utmoſt Facility and Expedition; as its conſtituent Materials evidently declare: The *Ol. Lini* and *Tereb.*

forming the Baſis of the Compoſition, are two excellent Digeſtives, and more eſpecially when conjoin'd; whereby it is render'd of the utmoſt Service, in promoting and bringing to a ſpeedy Suppuration, all contuſed and lacerated Wounds, whether made by Fire-arms or other obtuſe Inſtruments, for which its Equal is ſcarcely to be found: And by virtue of the ſaid Qualities it repreſſeth the inflammatory Heat of Scaldings and Ambuſtions, eaſeth the Pain, relaxeth the criſp'd Fibres, and finally concocts the fervid and acrid Serum into laudable Matter. The ſame doth it perform in Ulcers ariſing from other Cauſes.

The Verdigreaſe imparting a ſmall Acrimony or biting Quality hereto, gently deterges and wipes out the Excrements produced therein, corrects the Laxity of the new Fleſh, and thereby renders the incarned Subſtance more firm and ſtable.

So that in Requital of its good Offices we may affirm, that if ever the Name of a Catholicon, or univerſal Dreſſing, was due to any Medicament, it may lawfully be challenged here.

The Velvet or Silken Cautery of Ambr. Paræus.

Take the Aſhes of Bean-ſtalks, and thoſe of Oak-wood well burn'd, each three Pound; infuſe them in a ſufficient Quantity of River Water for a convenient Space (often ſtirring it about;) then add thereto, Quicklime four Pound; which being extinguiſh'd, rommage all well together

now

now and then for two Days more, in order to render the Capitellum more ſtrong and piercing; then run it through a ſtrong thick Cloth, and pour it back again upon its own Aſhes for three or four Times, that ſo it may extract the whole igneous or cauſtick Faculty therefrom; which being effected, put the ſaid clear Lixivium into a Barber's Baſon, or an Earthen Pot well leaded, and boil it gently over a clear Fire until it become thick and fit for making up into Uſe.

A great Part of the Myſtery or Art (ſaith this well-experienc'd Surgeon) conſiſts in the Manner and Limit of this boiling; for the Capitellum becoming thick, and concreting into a Salt, muſt not be kept ſo long upon the Fire, until all the Humidity be evaporated; for therewith the Force of the Medicament (which conſiſts in a ſpirituous Subſtance) will be diſſipated and much weakened: Therefore while as yet ſome Moiſture remains, it muſt be taken from the Fire, and made up into a convenient Form; kept in a Glaſs cloſe ſtopt from the Air, in a dry warm Place.

Theſe Cauteries, he tells us, are the beſt he ever made Trial of. If applied to any Part of the Body in the bigneſs of a Pea, in half an Hour's Time it eats into the Skin and Fleſh, even to the Bone, without cauſing any Dolour (if the Member was void of Pain and Inflammation,) making an Eſchar of the bigneſs of one's Finger's End, leaving the ſame ſo ſoft and humid, that within four or five Days ſpace 'twill ſeparate

or

or fall away of itſelf, without any Scarification: Whence (and upon the Account of ſome Silk or Velvet he purchaſed them with) our Author gave them the Appellation of the Velvet Cauteries.

But truly I am of Opinion with *Rhenodæus*, that conſidering theſe are form'd of a lixivial cauſtick Salt extracted from incinerated Vegetables, like to the other alkaline potential Cauteries, they cannot merit this ſoft and ſilky Epithet from their Effect, any more than the reſt of the fiery Tribe, being no leſs painful in Operation than the common *Lapis infernalis* of the Shops: Upon which Account *Bartholine* was induced to believe, that the true indolent Cautery of the ſaid Author was never publiſh'd, but only communicated to his Friends amongſt his other Arcana or Secrets. Be this how it will, the Medicament as we now have it is a cheap and effectual Cauſtick, of eaſy Preparation and extenſive Service; and therefore may be uſed in all Caſes where any of the like kind may be call'd in practice: Although in tender Habits the following mild Cauſtick of *Heurnius* is more eligible.

Take of Black Sope Lees, and boil them in a Frying-pan, or any other convenient Veſſel, until moſt of the Humidity be conſumed, and the Liquor become thick; which being removed from the Fire and a little cool'd, is to be cut into the Form of large Dice, and then immediately put up into a Bottle well cork'd and ſecur'd from the Air.

This

" This (ſaith our Author) I purchaſed with " great Coſt and Difficulty; and though for its " Worth more valuable than Gold, is now of- " fer'd *gratis* to the Publick:" And of ſix hundred cauſtick Remedies is the moſt excellent of them all, both in Safety of Operation, and Certainty of Effect; for it neither extinguiſheth the natural Heat of the Part, nor infers any bad Conſequence, but immediately ſuffers the ſubjacent Fleſh to incarn and grow up, after the Separation of the Eſchar; as will fully be confirm'd upon the Trial of this moſt noble and wholſome Remedy. The Manner of its Uſe and Application is like to the reſt of the Tribe, by laying a defenſative Plaiſter of an Hand's-breadth Compaſs upon the Part deſign'd for opening, in the Middle whereof a Hole is to be cut, proportionate to the Size of the Cauſtick in which it is to be placed, covering it over with a piece of the ſame Plaiſter; and further, leſt it ſhould fall off, 'tis uſual to apply two little Bolſters to the Sides thereof, in order to render it more firm and ſteddy during the Operation, which will be finiſh'd in half an Hour, or three Quarters at moſt, and that with the utmoſt Eaſe and Simplicity: Which if ſo, does far better merit the Term of the Velvet or true Indolent Cautery, than that of *Paræus* afore deſcribed.

In Imitation hereof (ſeeing the Lixivium of Black Sope is not alway to be met with,) a Succedaneum may be prepar'd of the ſaid *Sapo nigr.* and *Calx viv.* well mix'd together, according as *Guido, Tract. 7. Doct. 1. cap. 3.* hath appointed for the

the like Uſe, which operates with the ſame Mildneſs (though not with that Expeditiouſneſs,) and therefore moſt proper for ſoft and humid Temperaments, wherein this Medicament is chiefly of Service. It may be ſuffered to reſt upon the Part for twelve Hours ſpace, or a Night's time, and the Eſchar divided next Morning; for it creates little or no Trouble to the Patient, being one of the gentleſt and moſt amicable Cauſticks the whole *Materia Medica* can afford us: When there is Occaſion of quick'ning its cauſtick Faculty, a ſmall Portion of the *Liquamen cauſticum* being added unto it, will preſently do the Deed; though hereby we loſe the Benefit of its indolent Operation.

A Repelling Cataplaſm.

Take Barley-flour ſix Ounces; Pomegranate-bark in Powder two Ounces; Balauſtians half an Ounce; Juice of the greater Houſeleek three Ounces: Boil them in a ſufficient Quantity of Red-wine to the Conſiſtence of a Cataplaſm; adding towards the latter End, Oil of Roſes or Myrtils two Ounces: Mix them well together.

This Formula of Mr. Serjeant *Wiſeman* is taken from *Galen.* 2. *ad Glaucon.* who for the ſame Intention ordered Barley-meal and Pomegranate-bark to be boil'd in auſtere Wine, with the Leaves of Houſeleek and Sumach Seeds to a due Conſiſtence: Which hath ſerved as a Pattern for all Practi-

Practitioners unto this Day; being a moſt excellent Repercuſſive in all inflammatory Tumours, if timely adhibited in the Beginning; for then, according to the Doctrine of *Lib. de Tumorib. præter naturam, cap.* 2. Inflammations conjoined with Fluxion are moſt eaſily cured by Medicaments that do refrigerate and aſtringe; ſuch as the premiſed, which powerfully reſiſts the Fluxion, exſiccates the ſuperfluous Contents, and corroborates the Tone of the Member. In the Application whereof, it ought to be obſerved as a general Rule through all the repelling Claſs, *viz.* that the Medicament be never applied hot to the Part affected, for thereby we thwart the main Intention of Repulſion, which forbids all heating Remedies, whether actually or potentially ſo, to be uſed in this Caſe; inaſmuch as they rarify the Fluids, dilate the Paſſages, and give way to a greater Fluxion and Extravaſation; but Coldneſs, *vice verſa*, condenſeth the Humours, contracts and ſtraitens the Diameters of the extended Ducts and Poroſities of the Part; and finally, braceth up the conſtituent Fibres of the Veſſels to their due natural Tenſity, and this more eſpecially when the actual Chilneſs of the Medicament co-operates with the ſpecifick Quality of refrigerating Ingredients; as is evident from the noted Effects of cold Water or Oxycrate, when made uſe of for the ſame Deſign.

An Anodyne Reſolving Cataplaſm.

Take Flowers of Chamomile, Melilot, and Elder, cut ſmall (or groſly pulverized,) each one Handful; Seeds of Fenugreek and Linſeeds bruis'd, each one Ounce: Boil them in a ſufficient Quantity of Milk to about twelve Ounces, adding thereto as much white Bread as will give it a due Conſiſtence; and laſtly, with Oil of Roſes two Ounces, Saffron half a Dram, and two Yolks of Eggs, all well mix'd together, make a Cataplaſm.

When the Symptoms of an increaſing Phlegmon (or other inflammatory Tumour) runs high, whereof Pain is uſually the moſt principal and exorbitant, this Cataplaſm apply'd warm to the Part affected is an approv'd Remedy, not only in appeaſing the dolorous Senſation, but alſo in removing the conjunct Cauſe or Matter of the Diſeaſe along therewith, as the component Materials ſufficiently declare: The mollifying Faculty of ſeveral of the Ingredients act the Part of a true Anodyne in this Caſe; by ſupplying and relaxing the tenſe and rigid Fibres, and conſequently rendering them leſs perceptive of the impulſive Motion; the Saffron in the Interim contributing its Share in demulcing and appeaſing the Orgaſm of the irritated fervid Spirits, whence a Ceſſation of that moleſting Accident muſt neceſſarily ſucceed; whilſt the Reſidue of the aræotick Tribe are levell'd againſt the very Root or Eſſence

Eſſence of the Diſtemper, the warm ſubtil Parts whereof they conſiſt (without any manifeſt Acrimony or Dryneſs annex'd) renders them very adequate to attenuate, rarify, and reſolve the offending Contents, and at the ſame Time ſet open the Pores for their Exudation or Tranſmiſſion by a gentle Diaphoreſis; being ſuch as *Galen* himſelf, 6 *De Compoſit. Med. per Loca, cap.* 2. hath appointed to be uſed in the Augment of a Tumour, and therefore hath claſs'd theſe Simples in the loweſt Order of the diſcuſſive Catalogue, as moſt proper to ſatisfy the Intention which by the general Conſent of the moſt experienced Artiſts, bids us avoid all acrid reſolving Medicaments in this State, that by their Heat and Acrimony might ſtimulate the Part, and thence give Occaſion to a new Fluxion, with its Concomitants, Pain, Inflammation, *&c.* to ariſe; unleſs their active Particles be infringed and bridled by a due Portion of Repercuſſives added thereto, according to the Doctrine of the Antients, and Method of the preſent Practice; which even then puts them under a certain Limitation, in reference to ſome particular Affects: The former mild Remedies, contemporated with ſuitable Reſtringents, having moſtly the Preference in all inflammatory Tumours, during the whole Courſe of Augment or Increaſe; for which this following ſhall be exhibited as a Specimen.

Take Leaves of Mallows, Pellitory, Wormwood, each one Handful; Plantain and Red Roſebuds, each half a Handful: Boil them in a ſuffi-

ſufficient Quantity of Water 'till the Ingredients be ſoft and tender; then beat them to a Pulp, and commit them to the Decoction, with Barley and Bean Flour, each two Ounces; ſet them over the Fire again, until it become of a due Conſiſtence; and laſtly, by adding Oil of Chamomile and Elder, each one Ounce; Oil of Roſes two Ounces; make a Pultis.

This being of a very temperate Heat, conjoin'd with a ſmall Aſtriction, is very ſuitable to breathe out the extravaſated Humours, without impairing the Tone of the Part; which hereby is rather corroborated and enabled to propel and throw off the ſtagnating Juices, and ſo prevent what the Learned call a Fluxion, upon an affected Member; the Time of its Application, Manner of Uſe and Operation (abating the relaxing and emollient Quality,) may be referr'd to the foregoing, which in like manner commences at the Time, Repulſion becomes ineffectual, and may be continued, with a little Variation, according as the Symptoms increaſe or diminiſh, even to the very laſt Stage of the Tumour.

A Suppurative Cataplaſm.

Take Roots of white Lillies four Ounces; Leaves of Mallows two Handfuls; Linſeed and Fenugreek bruis'd, each one Ounce; Figs and roaſted Onions, each two Ounces: Boil them in Milk and pulp them (or at leaſt beat them to a ſoft Maſh or Pap;) adding, Hog's-lard

two

two Ounces; Oil of Lillies and Linſeeds, each one Ounce; Wheat-flour as much as will give the whole a due Conſiſtence: Whereto, in caſe of Pain, a little Saffron and the Yolk of a new-laid Egg may conveniently be annexed; which being duly incorporated over a gentle Fire, may be ſpread pretty thick upon a piece of Linnen Cloth, and applied warm to the Part affected, renewing the ſame as often as there ſhall be Occaſion.

The mucilaginous Nature of the Ingredients imparting a viſcid and glutinous Conſiſtence to the Medicament, eſpecially when long boil'd, gives it an excellent Faculty of ripening all ſorts of Tumours that have a Tendency this way; which may be known by the augmented Symptoms, and particularly the Pulſation, if the Remark of the well-experienced *Guido* hold true (as certainly it doth,) who tells us, that when the Part infeſted with a Phlegmon doth moſt vehemently beat, there is no other Hopes of Cure but Suppuration: For then, ſaith *Galen*, all the Antients adhibit thereto ſuch Remedies as moſt quickly promote Maturation, but not before. For which ſaid Intention, Cataplaſms, inaſmuch as by their viſcid and clammy Contexture they ſtop the Pores, preſerve the natural Heat, and prevent the Exhalation of the more volatile and ſubtil part of the Humours (whilſt the hot and moiſt Quality of the Ingredients aſſiſts Nature in concocting the Reſidue into laudable Pus or Matter,) ſeem for theſe Reaſons the moſt adequate

above all others; and thoſe chiefly that partake moſt of a mucilaginous or glewy Nature. Hence the *rad.* and *fol. Althæ. far. ſem. Lini, Fænugr. Tritic.* and all the ſlimy Tribe of Vegetables, are particularly ſelected for this Work; together with ſeveral of the officinal Compounds having Affinity this way; ſuch as the *Ung. Baſilic. Dialth. Empl. Melilot. Diachyl. mag. cum Gum.* and ſundry others, whereof many uſeful Compoſitions may be form'd: Amongſt which, this conciſe Preſcript of *Barbet*, very worthily merits a Place amongſt the ſuppurative Claſs of Cataplaſms.

Take of roaſted Onions three Ounces; Figs ten: Beat them to a Pulp; adding thereto, Baſilicon ſix Drams; Duck's-greaſe one Ounce; and, with a ſufficient Quantity of Honey and Linſeed Powder make a Cataplaſm.

The Uſe and Virtues are the ſame as the former, having the Advantage of a much ſpeedier Preparation than any of the preceding Tribe of Pultiſſes, wherein a previous Coction, *&c.* is required to perfect them. And therefore ſeveral Practitioners, to avoid that Trouble, have diſcarded the whole Claſs, and in lieu ſubſtituted other more compendious Forms of Medicines, ſuch as Emplaſters, Cerots, *&c.* to ſatisfy each different Intention; whereof in their proper Place, beginning with the Cerots firſt.

An Anodyne refrigerating Cerote.

Take ſimple Diachylon two Ounces; Ointment Populneum and Nutritum, each three Drams: Mix and make a Cerote.

Another.

Take Oil of Roſes one Pound; ſharp Vinegar an Ounce; white Wax four Ounces: Boil them to the Conſumption of the Vinegar; adding Sugar of Lead one Ounce; incorporate them well together, and when cold, put it by for Uſe.

The Virtues of both are not much different, in relation to their anodyne and refrigerating Faculty (the Populneum and Nutritum in the one, correſponding with the Oil of Roſes and Vitriol of Lead in the other;) whereby they equally cool and allay the preternatural Heat of Tumours, Wounds, and Ulcers, and abate the Pain therefrom proceeding. The former partaking of ſomewhat a more drying Quality recommends it alſo as a ſerviceable Application to all tetterous Eruptions, and fretting Exulcerations of the Cuticle; it corrects the Sharpneſs of the Humour, reſiſts the Fluxion, and finally dries up the excreted Matter, becoming thereby an Epulotick in ſome Caſes and Subjects; as doth the latter by virtue of the *Sal. Saturni*, which, as the celebrated *Boerhave* witneſſeth, is a very powerful

Styptick, cloſing the Mouths of the corroded or dilated Veſſels, and coagulating the Juices in Contact with it; which if they ſhould chance to be of an alkaline Nature, ſo as to deſtroy the Acidity of the Vinegar (as very commonly happens in theſe excoriating Affects,) the *Sacchar. Saturni* will thereupon tranſmute into a Calx or Ceruſe, and conſequently have the ſame Effects, and ſo become conducive to all the recited Intentions.

A Defenſative Cerote.

Take Oil of Roſes four Ounces; Juice of Plantain, Nightſhade, and Vinegar, each one Ounce and half: Boil them until the aqueous Humidity be evaporated, then ſtrain them, and add thereto, white Wax one Ounce; Powder of Bole Armoniack and ſeal'd Earth each half an Ounce; Myrtle Berries two Drams; Pomegranate Bark one Dram: Mix and make a Cerote according to Art.

This is abſtracted from *Vigo* with ſome Amendment, wherein I have omitted ſeveral Ingredients of ſmall Moment, and introduced others more proper in their room: So that the Medicament as it ſtands now, becomes not only a more powerful Intercipient, to ſtop the Courſe of the Humours flowing to an affected Member; but alſo obtains all the requiſite Qualifications that *Galen* hath appointed for an effectual and ſtrong Repellent, namely, that it ſhould conſiſt of cold, dry, and aſtringent Parts, ſuch as the premis'd Remedy

dy exhibits, whoſe component Materials are all of the ſame Nature and Quality, and therefore equally lays Claim to both Intentions. *Nam in eodem hærent cum repellentibus decantata illa intercipientia, & eadem cenſoriâ virgulâ digna eſſe ſtatuimus*, is the ſarcaſtical Remark of the accurate *Waldſchmidt*, which points out the great Affinity there is betwixt them, the only Difference reſiding in the Place of Application; the one requiring ſomewhat a diſtant Part from the Affect itſelf; and the other an immediate Application thereto: The former being deſign'd to guard off the Fluxion, and the latter to expel the conjunct Matter of the Diſeaſe. Each whereof are attain'd by conſtringing and ſtraitning the Diameters of the Veſſels, and bracing up the Fibres to their due natural Tenſity. And this certainly is beſt effected by the recited Qualities, as we have ſhew'd at large in the firſt Part of this Book, whereto I ſhall refer the Reader for his farther Inſtruction; only I ſhall here obſerve, that when this or any other topical Application is adhibited as a Defenſative, the impending excarnous Parts, or thoſe leaſt cumber'd with fleſhy Muſcles, ſuch as the Joints, wherein the Veſſels are moſt conſpicuous, and always ſelected by Practitioners for this Deſign; the Reaſon of which is ſo plain and evident, that needs no farther Explanation.

A mollifying reſolving Cerote.

Take Emplaiſter of Mucilages two Ounces; Oxycroceum one Ounce; Ointment of Marſh-

mallows ſix Drams; Oil of Dill and Chamamile, each two Drams: Mix and make a Cerote.

A Suppurative Cerote.

Take Emplaiſter of Mucilages, and Melilot, each one Ounce; Baſilicon and Dialthæa, each four Drams: Diſſolve them together over the Fire, and when a little cool'd, ſpread it pretty thick upon a piece of Cloth or thin Leather for Uſe.

Theſe Cerotes, by reaſon of their ſoft and tractable Conſiſtence, have much the Advantage of Plaiſters and Cataplaſms in the Cure of inflammatory Tumours; the one by its compact and ſolid Form, muſt needs ſit hard and uneaſy upon an aggrieved and tender Part; as the other by its Quantity proves often too weighty and troubleſome thereto: And therefore *Fabrit. ab Aquapend.* gave a particular Charge, that the Medicaments appropriated for this Work, ſhould in no wiſe be either too hard or ponderous, leſt they ſhould excite, or at leaſt exaſperate, thoſe Symptoms they are deſign'd to mitigate or appeaſe.

The former of theſe Remedies partaking of ſomewhat a leſs viſcid and tenacious Faculty than the ſubſequent, comes in Uſe when the Fluxion, with its Concomitants, Pain, and other Accidents, are abated, and the Tumour is at a ſtand; for then, ſaith *Avicenna*, 4 *Prim. cap.* 15. the Cure

of

of Apoſtems, inaſmuch as they are *in facto*, *i. e.* neither increaſe nor diminiſh, ought to be effected by Reſolution or Digeſtion, and the contain'd Matter render'd fluid; for which End, temperate Diſcutients, partaking of an emollient Nature, (like to the foregoing Preſcription) are generally appointed to be us'd, toward this latter Stage, or Declination of the Diſeaſe, in order to carry on the two Intentions of mollifying and reſolving the groſſer Contents, whilſt at the ſame Time the attenuated and thinner Portion gradually diſcuſſes and flies off by the ſecretory Organs peculiar to that Purpoſe: And theſe more eſpecially are called in Practice, when an unwonted Hardneſs occupies the Baſis and other Parts of the Apoſtem (a certain Sign of an approaching Induration, or ſchirrous Diſpoſition.) To remedy which, *Galen*, *Aetius*, and all their Succeſſors, commanded Emollients to have a Share in the diſcutient Applications, for Reaſons already given; and at this Time it is, that relaxing and ſoftening Remedies can ſafely and ſerviceably be uſed in inflamed Tumours: For during the whole State of Augment, they obtain no Place there, (being certainly prejudicial to the very Height of the Diſtemper. But then all Hopes of Repercuſſion and Reſolution being laid aſide, the Curation turning upon another Hinge, the Aſſiſtance of ſuch like Remedies is required amongſt the ſuppurative Claſs of Medicines; wherein, as *Wecker* afore obſerv'd, there is a great Similitude of Nature, being each of the ſame temperate Heat and Humidity, analogous to that of the human

Temperament, whereby they aſſiſt Nature in converting the crude Humour into Pus, and this more effectually and expeditiouſly when promoted by the Help of a glutinous and viſcid Conſiſtence. Whence *Galen*, *Paulus*, and *Avicenna*, with other Practitioners of famous Memory, have unanimouſly commended the Tetrapharmacon of the Ancients, (*i. e.* our Baſilicon) as a moſt excellent Remedy to ſuppurate Phlegmons (when advanced to their State or Vigour) whereto others with the ſame View have annexed the mucilaginous and gummy Plaiſters; ſuch as the *Diachyl. magn. cum Gum. &c.* in order to give it a better Body. And I, upon the ſame Grounds, being taught the Reaſonableneſs of ſuch Practice, have exhibited this latter *Formula*, conſiſting of emollient Suppuratives, and tenacious Parts, whereby it relaxes and thins the Solids, or containing Teguments, mitigates the Dolor, occludes the Pores, conſerves the ingenite Heat, and finally promotes the Maturation of the indigeſted Contents, and that with as much Facility and Expedition as the moſt famed Remedy of them all; going under the like Denomination. And farther, by diminiſhing the Quantity of the Melilot and Baſilicon (that renders it more viſcid and emplaſtick than is meet for the following Uſe) a moſt excellent diſcuſſive Euporiſton may be obtain'd; whereto, if Camphor one Dram, diſſolv'd in Oil of Chamomil, be added, 'twill render it more effectual to open the Pores, as the celebrated Dr. *Freind* judiciouſly hath advis'd in the like Caſes, and the accurate

accurate *Barbet* no leſs rationally hath put in Practice.

Our Cerote of Lapis Calaminaris.

Take Emplaſter of *Lapis Calaminaris* four Ounces; *Diapompholigos* (or in defect, white Ointment camphorated) and red Deſiccative, each ſix Drams: Liquify them over the Fire, and incorporate all well together, by continual ſtirring, until it be cold, and fit for Uſe.

This compendious and eaſy-prepar'd Medicament, is one of the beſt Epuloticks to be met with, ſurpaſſing even that famed and truly praiſeworthy Remedy the *Empl. Griſeum* it ſelf, which by reaſon of its hard, dry, and brittle Conſiſtence, (eſpecially when long kept) becomes even almoſt unſerviceable for the Intention, until diluted and let down by ſuch proper Materials, whereby it is render'd not only more adheſive to the Part, and tolerable to the new-made Fleſh, but alſo more effectual in covering it over with a firm Cicatrix; whereto the *Colcothar. vel Caput mort. vitrioli* entering the *Deſiccativum Rubrum*, contributes its Share in as ample and large a Manner as any of the other Ingredients whatever; for it ſhuts up the gleeting Conduits, by conſtringing, and, as it were, wringing together the minute Orifices through which the ſharp and ſaline Serum iſſued, whilſt the Reſidue of the alkaline metalline Tribe edulcorates and abſorbs that which is already excreted, drying and hardening the ſame into a callous Subſtance, without which two Faculties conjoin'd,

join'd, it were almoſt impoſſible (or at leaſt with the utmoſt Difficulty) to accompliſh: So that I may venture to affirm upon Experience, (without running out into other unneceſſary Praiſes) that whatſoever may be expected from a true and powerful Epulotick, may here be met with in full Perfection.

Gualter's *Cerecloth for fractur'd Bones.*

Take Powder of Frankincenſe, Wheat-Flour, (or Milduſt finely ſifted) Maſtick, Bole Armoniac, Roſin, Cypreſs Nuts, Madder, each two Ounces; Ram's Suet, and white Wax, each Half a Pound: Melt the Suet, Wax, Roſin, and Frankincenſe, over a moderate Fire; then put in the Powders, and if it ſhould be too ſtiff, add as much Oil of Roſes as will give it the due Conſiſtence of a Cerote; into which, whilſt it is yet hot, dip Linnen Cloaths, for the ſaid Uſe.

When the Danger of Fluxion and Inflammation is over in a fractured Member, which according to the Account of *Hippocrates* and *Galen* is after the ſeventh Day, (generally ſpeaking) then by their Authority emplaſtick Medicaments are to be applied for promoting the Generation of a Callus; for which Intention, the recited Sparadrap hath the Teſtimony of that accompliſh'd Artiſt *Ambr. Parœus*, to vouch for its Sufficiency; who from his own Experience adviſeth us to make uſe of it in the like Affects: And if we ſtrictly examine the component Ingredients, Reaſon will dictate the

the ſame unto us; for being of a very temperate Quality, in reſpect of Heat or Dryneſs, it preſerves the Subſtance of the Part in its due Craſis, and withſtands the Accidents that might ariſe by virtue of the moderate Exſiccation and Aſtriction lodged in the Bole Armoniac and Cypreſs Nuts; whereby it alſo confines the cementing Juices within their proper Limits, and haſtens forward the Conſolidation of the ſame, which the emplaſtick Faculty of the others encourages and promotes the Growth of, without incurring the Danger of melting the callous Matter by too much Heat, or preventing its Formation by an Exceſs of Dryneſs, or, finally, by running it down with too much Moiſture: Againſt which Extremes, *Guido*, *Tagaultius*, and other renowned Men, from *Galen*, the Head of all, have candidly admoniſhed us to beware, and alſo to have a particular Regard to the different Seaſons of the Year, Age, Sex, and Temperament of the Patient, with other Circumſtances, wherein a different Remedy is required; for otherwiſe (as a very good Judge in this Matter informs us) many unlook'd for Accidents will ariſe, from even the beſt of Medicines, when injudiciouſly made uſe of; a noted Inſtance whereof may be met with in the chirurgical Obſervations of *Hildanus*, *Cent.* 1. *Obſ.* 98. where he ſaith that the *Empl. ſtifticum Paracelſi*, when applied rationally, and in thoſe Caſes wherein it is convenient, is a moſt excellent Remedy; but contrariwiſe, moſt pernicious, when empirically adhibited, without any Regard to the Nature of the Wound, or that of the Part affected: Which he confirms

confirms and illuſtrates by an Example. But as it hath no immediate Reſpect to this Subject, we ſhall paſs it over, and conclude, that whatſoever Objections lie againſt the hot gummy Plaiſters, the ſame are invalid here, the temperate Quality of this Compoſition rendering it neither too hot for the Summer, nor yet too cold for the Winter.

Vigo's *Cerot for a Concuſſion of the Brain.*

Take Bran well dried and ſifted, three Ounces; Powder (or Meal) of Lentils two Ounces; Roſes, Leaves and Berries of Myrtles, each one Ounce; *Calamus Aromaticus* one Ounce and a Half; Chamamil and Melilot, each Half a Handful; Cypreſs Nuts Number ſix; Oil of Roſes and Chamamil, each three Ounces; white Wax two Ounces and a Half; Frankincenſe, Maſtick, each three Drams; Myrrh two Drams: To the Oils and Wax melted, add the Reſidue in fine Powder, with a Dram and a Half of Saffron duly pulveriz'd: Mix all well together, and form a Cerote of due Conſiſtence, which if it ſhould prove too hard, (as undoubtedly it muſt, if made according to this Preſcription) you may by augmenting the Quantity of the Oils and Wax, (with moderate boiling) reduce it to the juſt Body of a Cerecloth.

This *Ambr. Paræus* hath abſtracted from *Vigo*, *Lib.* 3. *De Apoſtem. cap.* 5. with great Alteration, not only in the Quantity, but alſo in the Ingredients themſelves; for he hath omitted the Stœchas,

chas, Squinanth, Coriander, Anniſeeds, Betony, Woodbine, Dill, Wormwood, and the very Saffron which I have annexed, (all aromatick and cephalick Ingredients) and in lieu ſubſtituted the Maſtick, Myrrh, Frankincenſe, and Cypr. Nuts, with ſome other immaterial Articles: So that whether it be for the better or the worſe, I ſhall not here determine; only thus far may venture to affirm, that the Compoſition as we have it now, is much more conciſe and artificial, than what its primitive Author hath exhibited, which in that Form he left it, looks rather like a Pultiſs than a Cerote. However, ſeeing the Uſe and Virtues are not much different in the main, we ſhall deliver them in the Words of the recited Authors: Firſt then, the whole Head being ſhaven, and the Fluxion with its concomitant Symptoms abated, this Cerote of *Vigo*'s is to be applied; which, as *Paræus* tells us, hath Power to diſcuſs indifferently, to dry, and draw forth the Humours that are under the Skull, and by its aromatick Force and Power to comfort and ſtrengthen the Brain; as is fully confirmed by *Vigo*, who gives us the following Hiſtory of its Efficacy to this Effect.

"In the ſecond Year of Pope *Julius* the ſe-
"cond, we undertook the Cure of a Gentleman
"belonging to the Duke of *Urbin*, who riding
"over the Bridge of St. *Angelo*, fell from his
"Horſe, and hurt himſelf grievouſly on the
"Head, upon a marble Stone; and what was
"worſe, the Horſe after the Fall ſtroke him upon
"the Place hurt, ſo that he lay as if he had been
"dead, the Blood guſh'd out of his Noſe,
"Mouth,

" Mouth, and Ears; and his Head, Face, and " Eyes ſwelled with a blackiſh Colour, (by rea- " ſon of the Effuſion of Blood.) Many Surgeons " and Phyſicians were called to his Aſſiſtance; " but after they had conſidered his Caſe, they all " left him for a dead Man. Afterward I (ſaith " our Author) was alſo conſulted, and after a " Proteſtation of the Danger made, by the Grace " of God healed him; howbeit he loſt part of his " Memory and Speech.

" The Cure was begun with the Application " of the recited Cerote over the whole Head, " then we did embrocate his Neck with the Oils " of Chamamile, Dill, and Coſſus, malaxed " with Hens Greaſe; and for the Sake of Revul- " ſion, Cupping Glaſſes, without Scarification, " were applied to the Shoulders and Buttocks, " uſing Ligatures and Frictions to the extreme " Parts, with emollient laxative Clyſters now and " then injected; by which Means, with a ſpare " Diet, (of Chicken Broth, Gellies, *&c.*) the " Fluxion was averted, and the impacted Matter " diſcuſſed and dried up, and the Patient, after " he had continued dumb or ſpeechleſs for twen- " ty Days, recover'd beyond Expectation. So " great and marvellous is the Efficacy of this Ce- " rote, (ſaith the renowned *Parey*) that could " hinder the generating of an Abſceſs, which was " incident to the Brain, by reaſon of the Fall." Howbeit, he would not have it applied till the fourteenth Day be paſt; in which Interim he adviſeth repelling Medicaments (on account of the ſupervening Accidents) to be adhibited. Yet

Vigo

Vigo (we find) uſed it from the very firſt. And I can truly affirm, and ſeveral now alive of good Credit can witneſs, that I recovered the Daughter of one Mr. *Mayehell* (then about fifteen Years of Age) of a Concuſſion of the Brain, received by a Fall backward from an Horſe upon the Sands, where ſhe was taken up as dead; and tho' I was not called for till fourteen Hours after, in which Time no Help was adminiſtered but what the good Women by their Over-officiouſneſs afforded, in pouring in cordial Drams, *&c.* to her great Damage; yet by ſomewhat a like Method, uſhered in with due Revulſion and Evacuation, ſhe became ſo well as to recover both her Speech and Senſes, which for four Days were quite aboliſhed, and in leſs than a Week's Time to be removed home to her own Dwelling.

Another Cephalick Cerot.

Take Oil of Roſes Half a Pound; Calf's and Weather's Suet, each two Ounces and a Half; Roſin, Gum Elemi, each two Ounces; Betony, Woodbine, and Roſemary Flowers, each one Handful; White Wine two Pounds: Boil 'em together till the Wine be conſumed, then ſtrain out the Liquor by a ſtrong Expreſſion, and add thereto Maſtick in fine Powder, an Ounce and a Half; Cochineal Half an Ounce; Madder ten Drams; Ammoniacum diſſolved in Vinegar, and inſpiſſated, ſix Drams; Venice Turpentine four Ounces; white Wax, as much as will give it the due Conſiſtence of a Cerot.

This

This is likewiſe owing to the recited Author, who recommends it as a Medicament of ſingular Operation in Fractures of the *Cranium*, anſwering all the Intentions required (from a Plaiſter) in this Caſe. " For (ſaith the judicious *Paræus*) *Vigo*'s " Cerote, in my Opinion, is moſt fit for Fractures " of the Skull, by reaſon it draws powerfully, " reſolves and dries moderately, and by its kind- " ly Warmth and aromatick Effluvia, refreſhes " the animal Spirits, and corroborates the Brain " and Membranes thereof, as you may eaſily " perceive by the Ingredients entering the Com- " poſition, which render it very adequate for all " Wounds of the Head, as well ſimple as com- " pounded; and may very well ſerve as a Sub- " ſtitute to the *Ceratum de Betonica* of *Berenga-* " *rius*, or that of *Fallopius* going under the ſame " Name, being much better than the former, " and more compendious than the latter, from " whom the pharmacopeal Compilers have bor- " row'd the *Empl. de Betonica* of the Shops.

An Opthalmick Collyrium.

Take Plantain and Red Roſewater, each four Ounces; Troches of Rhaſis one Dram; Sugar of Lead twelve Grains: Mix and make a Collyrium.

When an Inflammation ſeizeth upon the *Tunica adnata*, *(vel Conjunctiva)* with a ſmarting Heat and Pain, which the *Latins* call an *Ophthalmia*, the Indi-

Indications of Repulſion are the ſame as in other Parts of the Body, when attended with the like Accidents; and therefore Practitioners do always begin the Cure with cooling aſtringing Remedies, in order to repel the influent Humours, and therewith give a Spring to the weakened Fibres to throw off thoſe already contained in the capillary Veſſels of the ſaid Membrane.

For which End, the preſcribed Medicament may very ſuitably be applied (on double Compreſſes moiſten'd therein) at the Beginning of the Fluxion, and renew'd as often as there ſhall be Occaſion; *i. e.* while the Intention takes Place. But that becoming ineffectual, which may quickly be perceived in a few Days Time, by an Increaſe of the Symptoms, (in lieu of an Abatement) then theſe cooling repelling Remedies are no longer ſimply to be inſiſted on; leſt thereby not only the extravaſated Lympha ſhould be congealed and thickened upon the Membrane, and the obſtructing Contents rendered more pertinacious and inherent, but alſo the natural Humours of the Eye ſhould ſuffer along therewith. For which Cauſe, Practitioners (like as in the Augment of a Phlegmon) generally add ſome Portion of a reſolvent or diſcutient Medicament thereto; ſuch as the *Aq. Euphrag. Fenic. Camph. &c.* whereof this following may ſerve for an Example.

℞ *Aq. Plantag. Roſar. Rubr. ana* ℥ii. *Fenicul. Euphrag. ana* ℥i. *Sacch. Saturni* ℈ß *Camph. (ſolut. in gutt. aliq. Spt. Vini) gr.* vi. *Miſce, fiat Epithem.*

This, with a little Variation, may be uſed to the very State of the Diſeaſe, at which Time, *Riverius* orders more powerful Diſcutients to be adhibited; and if the ſame ſhould be accompanied with an *Epiphora*, then (ſaith the learned Dr. *Coward)* unleſs Vitriolicks be commixed with the topical Applications, our Labour is in vain.

Boyle's *Hæmoptoick Electuary.*

Take Seeds of white Poppy and white Henbane, each Half an Ounce: Powder them very finely, and with Conſerve of red Roſes, and Syrup of red Poppies, make an Electuary, whereof take the Quantity of a ſmall Nutmeg twice a Day.

I have known this *Formula* very much commended by ſome Perſons, as a moſt excellent Remedy for ſtopping a ſpitting of Blood; and truly the incraſſating or thickening Faculty of the Ingredients, ſeems peculiarly to recommend it for that Uſe; which requires the inordinate Motion and Effervescency of the Humours to be repreſſed and allay'd, and their ſharp ſaline Parts contemperated and inviſcated; the irritated Fibres demulced and appeaſed; and principally the Orgaſm of the Spirits compoſed, before the Anaſtomaſes or Apertion of the Veſſels can be ſtopped and agglutinated by the grumous or balſamick Parts of their Contents.

All which may be hoped for (with other ſuitable Aſſiſtances) from a Medicament conſiſting of glutinous

glutinous Particles, and a narcotick and aſtringing Faculty conjoined; ſuch as the premiſed of our Author's, which ſtands ennobled with his illuſtrious Name and Commendation; and of no leſs Efficacy and Virtue might we have enjoyed a ſtandard Medicine of the Shops, if the *Philonium Perſicum* had retained its ancient and genuine Preſcription, which by ſome Error of old, committed either by the Publiſher, Printer, or otherwiſe, hath ſo far altered its Nature and Quality, as to render it quite oppoſite to the Intention it was deſign'd for; as *Matthiolus* in *Epiſt. Balthaſ. Cleuſeol. p.* 206. hath plainly made appear in the following Manner:

In perſico Philonio (ſays he) *nil tibi dubitandum erit, an Piper album, aut Papaver album commiſcendum ſit, ſi Meſuis Librum legeris; ubi de ſanguinis rejecti curatione ſcribit, Papaver album, non Piper album imponit; quod in ſanguinis fluxione, nullo Pipere opus ſit, ſed quæ refrigerent & fluxiones cohibeant, cujuſmodi eſt Papaver. Rectè autem Philonium hoc Pipere deſtituitur; nam quum pro infrenando Opio, & Croci & Caſtorei ſatis excipiat, illi ſane opus non eſt addere Piper, ut magis incaleſcat, ubi potius refrigerari debet Medicamentum, quod ſiſtendo ſanguini paratur.*

Now from hence it is manifeſt, (whatever long Uſe and Cuſtom may plead to the contrary) that the white Poppy Seeds, and not the white Pepper, ought to enter the Compoſition. "For (ſaith he) "if you peruſe *Meſue*'s Book upon this "Subject, (of vomiting or ſpitting Blood) you'll "find that he puts in the white Poppy, and not

" the Pepper." The Reaſon whereof he thus pertinently ſubjoins, becauſe in all Fluxes of Blood there is no need of Pepper, but rather of thoſe Things which refrigerate and repreſs the Fluxion, of which Sort is the Poppy. Rightly therefore (concludes our Author) ought the *Philonium* to be void of Pepper. And farther, in anſwer to ſome Objections that might be ſtarted concerning the Opium which the Ancients took to be of a cold Quality, and as ſuch might ſtand in need of a powerful Corrector, he judiciouſly adds, that the Caſtor and Saffron are abundantly ſufficient for the Work; inculcating once more, that there can be no Room for Pepper, inaſmuch as it too much heats and rarifies the Blood, (and conſequently increaſeth the Fluxion;) whereas, *è contra*, the Medicament ought rather to refrigerate and damp its Motion, which is wholly prepared and deſigned for ſtopping Bleeding. And yet, notwithſtanding, *Salmon*, in his Comment upon this Medicine, when made with the Pepper, according to the uſual Way, (as hot and fiery as it was) had the Aſſurance to affirm that it ſtopp'd an immoderate Flux of the Menſes, Whites, Hemorrhoids, Catarrhs, Dyſenteries, and ſundry other the like Diſeaſes; whereas it acted rather the reverſe, by putting the Humours into ſuch a Fury and Hurry, that neither the Opium nor Henbane Seeds could be able to appeaſe; for which Cauſe (though wholly owing to this Overſight) 'tis now rejected in preſent Practice, that otherwiſe might have ſtood in Competition with the moſt celebrated (if not the capital) Remedies

medies of the Shops. The ſame is applicable to ſome others falling under a like Conſideration.

Our Catholicon, or Univerſal Purging Electuary.

Take Lenitive Electuary one Pound; Diagridium and Powder of Colocynth, each one Ounce; Salt of Tartar and Oil of Caraways, each two Drams; Syrup of Buckthorn four Ounces: Mix and make an Electuary. The Doſe is from one Dram to four, according to the Age and Conſtitution of the Patient, being taken as other Purges, in the Morning early, with due Government.

It works pretty briſkly, and with as little Trouble to the Stomach, as any of the ſcamoniate Tribe can do; the *Sal Tartari* opens the Body of the *Diagridium*, and prevents its Particles from running together, or adhering to the Folds of the Ventricle or Inteſtines, whereby many anxious Symptoms are prevented that commonly attend the uncorrected reſinous Subſtances; whereto the *Ol. Carui* equally concurs, by virtue of its oleous or ſpirituous Quality, which alſo renders its Operation more quick and ſmart, as is evident from the Pill *Ex. Duob.* when duly malaxed with the Oil of Cloves; (ten Grains of that Maſs working better than Half a Dram wherein the ſaid Oil is deficient in Quantity, as I have oft experienc'd) and which is yet farther of Service, the Medicament will much longer retain its Virtue and Conſiſtence, and by that means become a very uſeful

Article in the Sea Cheſt. For, as *Ramazini* from *Bartholine* upon *Bonetus*, obſerves, ſea-faring Perſons require almoſt double the Doſe of Phyſick to purge them, that other People do; and if ſo, (as I am very well aſſured it is) this ſame Remedy (being not ſo ſubject to grow dry and corrupt, as moſt others are) ſeems to me as ſuitable and proper as any of the like Form and Quality the young Surgeon can carry along with him.

Balſamick Electuary for a Gonorrhœa.

Take Powder of Jallap one Ounce; *Diagridium* and Cream of Tartar, each Half an Ounce; Roſin of Jallap and *Sal Prunellæ*, each one Dram; Oil of Juniper two Scruples; Camphor diſſolved in Oil of Almonds one Scruple; Balſam of *Capivi* diſſolved in the Yolk of an Egg, ſix Drams; Conſerve of Hips one Ounce; Syrup of Marſhmallows as much as will make an Electuary of due Conſiſtence; whereof a large Knife-point full may be taken every Morning faſting, until the gleeting Matter becomes well colour'd, and ſmall in Quantity; obſerving an exact Regimen all the while.

In a recent and ſimple Gonorrhœa, terebinthinate purging Electuaries (or thoſe prepared of the natural liquid Balſams, which are much one and the ſame Thing, ſaving the Degree of Purity and Perfection) have often been known to do much Good; the peculiar Tendency they have to the urinary Paſſages, and Seat of the Diſeaſe, renders

renders them very adequate for fetching out the infected Matter lodged in the Proſtaty and other diſeaſed Glandules, and afterward healing the Excoriations produced by the venereal Ferment, (or putrid *Lympha*, as the learned Profeſſor *Waldſchmidt* will have it) whether in the Duct of the *Urethra*, or other Parts; the Camphor in the Interim abating the moſt anxious Symptoms, whereof the Dyſury, or ſcalding of Urine, with the Priapiſm, or painful Erection and Contraction of the *Penis*, are the moſt common and exorbitant, even during the whole Stage of Cure, unleſs timely reſiſted by the Efficacy of this moſt excellent Medicine: But when the Infection is greater, or by the prepoſterous and undue Uſe of Aſtringents the malign and venenate Humour comes to be infixed in the ſaid Parts, and according to the vulgar Expreſſion lock'd up in the Body, then theſe mild balſamick or terebinthinate Purgatives are not wholly to be relied on; but therewith is to be adjoined the Uſe of Mercurials now and then adhibited, in order to diſſolve and render fluid the coagulated and obſtructed ſeminal Matter. For, as Dr. *Pitcairn* very truly obſerves, a ſimple Gonorrhæa never turns into a confirmed Lues, or Pox, unleſs it be unſkilfully and unſeaſonably ſtopp'd: And therefore when this happens, the only Way to cure, is to promote the running by the aforeſaid Means, which may be continued (at due Intervals) until the Symptoms ceaſe, and the corrupted and putrid Humour becomes white, clear, and fluid, accor-

ding as that eminent Perſon hath adviſed, and the preſent Practice eſtabliſhed.

Anodyne Arthritick Emplaiſter.

Take black *De Minio* (boiled with equal Parts of Linſeed and Sallet Oil) one Pound; Caſtile Soap thin ſhaved, four Ounces: Diſſolve them over the Fire, and add thereto Opium ſtrein'd and inſpiſſated, two Ounces: Evaporate all the aqueous Humidity, and when removed from the Fire and a little cooled, put in Camphor diſſolved in Oil of Roſes, ſix Drams; Saffron in Powder two Drams; Salt of Lead Half an Ounce; common Turpentine two Ounces; Mix and make an Emplaiſter.

This diſcuſſive anodyne Plaiſter, which for its excellent Virtues in ſundry obſtinate Caſes worthily merits a Place amongſt the ſtandard Medicines of the Shops, is much of the ſame Nature and Quality with the arthritick Balſam aforegoing. So that whatever Virtues and Uſes are aſcribed to the one, may very pertinently be transferred to the other, with this Advantage of adhering longer to the Part, whereby it more effectually corroborates and rouzes up the languid and natural Heat in cold groſs Tumours, attenuates, rarifies, and reſolves their included viſcid Contents, and finally ſets open the Pores for their Exudation, and this generally with greater Facility and Succeſs than what can be expected from

from the liquid Remedies, which paſs off ſooner, and conſequently cannot have that Energy upon the hardened obſtructing Humours, which the more ſolid and compact Forms of Medicines (whoſe Effects are more durable and permanent) afford us Room to hope for.

Our adheſive Emplaiſter.

Take Diachylon two Pounds; Burgundy Pitch one Pound; Roſin and black Pitch, each Half a Pound: Boil them a little, and when cooled work it up into Rolls for Uſe.

This (when rightly prepared) is a very adheſive Plaiſter, and much cheaper than the pharmacopæal Proceſs of the ſame Name, that takes in the exotick Gum, to which it may ſerve as a Subſtitute for common Occaſions; eſpecially where a large Expence of Plaiſter is daily required, and Adheſiveneſs is the only Thing in view: Although otherwiſe it may be admitted amongſt the diſcutient Tribe of Medicines, particularly thoſe of its own Form and Claſs; where, if it cannot promote or augment their Virtues, by any additional Quality of its own, yet by retaining them cloſer to the Part affected, it may be ſaid to contribute its Share thereto.

Emplaiſter of Betony the Leſs.

Take Juice of Betony, Plantain, and Smallage, (or in Defect Parſley) each one Pound; yellow Wax,

Wax, Pitch, Roſin, and Turpentine, each half a Pound: Boil all gently together, (except the Turpentine) continually ſtirring the ſame until the Juices be wholly conſumed; then ſtrein it from the *Fæces*, or Droſs, and laſtly put in the Terebinth, which being diſſolved and incorporated with the Reſidue, make an Emplaiſter according to Art.

Whereto, if four Ounces of Gum Elemi was added, and in Lieu of the black Pitch the Burgundy was made uſe of, the Compoſition would ſtill be more effectual for all the deſigned Intentions, and might ſerve very well inſtead of the *Empl. Andr. è Cruc. è Gum. Elemi, Gratiâ Dei*, and all the Tribe of vulnerary cephalick Plaiſters, which are very near one and the ſame in Virtue and Manner of Operation, allowing for the vegetable Juices, wherefrom this Medicament aſſumes an uncommon Efficacy in the Cure of all green Wounds and Ulcers, but eſpecially thoſe of the Head, which it preſently heals, and ſuffers no bad Accident to ariſe. It reſiſts Putrefaction, and wonderfully appeaſeth Inflammation, as the learned *Fernilius* teſtifies, farther affirming, that it agglutinates, deterges, incarns, and cicatrizes; whence it becomes equally ſerviceable in all Affects of the like Kind, in what Part of the Body ſoever ſituate, whether ſimple or compound, or attended with or without Loſs of Subſtance; for which good Offices, it hath always been in great Eſteem amongſt Practitioners, even from the Time of *Meſue*, its reputed primitive Author,

from whom *Nicolaus Myrepſus* hath taken (in Imitation of the foregoing) his *Empl. de Gratia Dei* made after this Manner:

Take Turpentine half a Pound; Roſin one Pound; white Wax four Ounces; Maſtick one Ounce; Betony, Vervain, Burnet, freſh gathered, each one Handful: Bruiſe the Herbs, and boil them in a ſufficient Quantity of White-wine (or in Defect thereof Water may do as well) to the Conſumption of a third Part; then preſs out the Liquor, and diſſolve therein the Wax and Roſin, continually ſtirring the ſame until all the aqueous Humidity be evaporated; then add thereto the Turpentine, which being removed from the Fire, put in the Maſtick in fine Powder, and make an Emplaiſter according to Art.

This is ſtampt with the ſame Character as the former, and partakes of all the ſame Virtues, the Betony being the principal cephalick Ingredient in both, which hath ſuch a ſingular Reſpect to the Head, that, as *Bartholine* in his anatomical Hiſtories tells us, the very Roots of this Plant will emit their Vapours to the Head and intoxicate: This he proves from the Hiſtory of ſome Gardeners, that by pulling up this Plant in the Garden of a certain Apothecary became all drunk. When they were queſtion'd about the Cauſe of that Diſorder, they all proteſted they had drank nothing; but only when they pull'd up the Roots of that Vegetable were ſo affected. Whence *Etmuller*,

muller, from the ſaid Author, remarks, that it is of a narcotick Nature, and as ſuch is wonderfully beneficial in all contuſed and painful Wounds, but more particularly (ſaith he) thoſe of that noble Part.

A Carminative Lateral Emplaiſter.

Take Emplaiſter of Mucilages and Melilot, each half an Ounce; Cummin Seeds in fine Powder two Drams; Venice Turpentine as much as will give it a due Conſiſtence; adding thereto, Camphor diſſolved one Scruple; Oil of Caraway Seeds half a Dram: Incorporate all well together, and ſpread it pretty thick upon Leather, to be applied to the pained Part.

Amongſt the topical Applications adhibited in a Pleuriſy, this Medicament (with others of the like Form and Quality,) conſiſting of thin, ſubtil, and volatile Parts, may ſometimes be uſed to Advantage, particularly in the ſpurious kind, where the external Intercoſtals only are affected; for in a legitimate or true Pleuriſy, its Effects are not ſo evident, the interpoſing denſe Muſcles and Membranes on the one hand, denying its Acceſs to the affected Parts; as on the other, the arterial Stream of Blood prohibits the Entrance of its Particles that way to the obſtructed Veſſels: And by the long Courſe of the recurrent Tubes, what Help can be expected herefrom? But where the Seat of the Diſeaſe lodges nearer the Surface, and within the Verge of their Acti-

Activity, the Caſe is different, and the Succeſs anſwerable, being then equally capable of reſolving the pituitous Lympha, or flatulent Vapour that might obſtruct and diſtend the Veſſels and ſuperincumbent Membranes (whence Pain, Tenſion, and Inflammation might ariſe in the external Teguments) ſo as to reſemble a true Pleuriſy; which, as the learned *Waldſchmidt* obſerves, hath often miſled Phyſicians, in diſtinguiſhing the one rightly from the other.

A Diſcuſſive Emplaiſter uſed in the Hoſpitals.

Take Oil Olive and Venice Turpentine each one Pound; Burgundy Pitch and Bees Wax each half a Pound (or rather twelve Ounces:) Boil them together to a due Conſiſtence; whereto if ſix Ounces of Quickſilver be added to each Pound of the Compoſition, the ſame will be render'd more effectual to all the deſign'd Intentions.

Which are chiefly for diſcuſſing hard groſs Tumours, in what Part of the Body ſoever ſituate, not excepting the very Bones themſelves; for the nutritive Juices which have been inſpiſſated and coagulated by a pocky Acidity (or any other Cauſe) within the Channels of the bony Fibres, and thereby produced an Exoſtoſis on the Part, may by proper Mercurials be diſſolved and rendered fit for Tranſpiration, as the fam'd Monſ. *Le Clerc* informs us, and daily Experience confirms unto us.

And

And beſides the common Uſes of reſolving and diſperſing the viſcid Contents of venereal and ſcrophulous Tumours (with other pertinacious Affects of the like ſort,) it may be applied to the Arms and Legs, for raiſing (or continuing) a Salivation to its due Height, according to the Method propoſed by ſome Practitioners, which though it be not look'd upon as one of the moſt certain and ſafeſt ways; yet notwithſtanding muſt be acknowledged much neater and cleaner than the frequent dawbing with mercurial Ointments: And on the ſame Head it may be introduced for the Cure of ſeveral cutaneous Diſtempers, and particularly the Itch, wherein it acts the Part of a true Specifick, in repreſſing and rooting out the very Seeds of that troubleſome and filthy Malady, without incurring the leaſt Danger of a ſubſequent Ptyaliſm, or any of its attending Accidents, if rightly managed; which gave Occaſion to the learned Dr. *Willis* thus to expreſs himſelf in Behalf of Mercurial Remedies; "Wherein "(ſaith he) 'tis no Wonder if Medicaments of "this kind heal the Places of the Skin affected "with the Pſora where-ever applyed: For by the "Application hereof, Wheals, Puſhes, and all "malignant Ulcers, *viz.* venereal and ſcorbu-"tick, are wont to be tamed. Neither is it to "be wonder'd at, that theſe Remedies admini-"ſtred in any private Places, as long as they ex-"cite a Salivation, are a Cure in an univerſal "Itch. But really (continues he) that without "ſpitting they can produce ſuch an Effect, as "that a Mercurial Girdle worn about the Loins,

"ſhould

" ſhould aboliſh the Scab of the whole Body, " and that without any ſenſible Evacuation or " Harm cauſed thereby, is not ſo eaſily appre- " hended.

Now as the Quickſilver is the principal operative Ingredient in this Compoſition, and the more it is impregnated therewith the better; I ſhould rather prefer the *Empl. Mercuriale* of the *London* or *Edinburgh* Diſpenſatory, which not only takes in a larger Proportion of fluid Mercury, but alſo hath adjoined ſome powerful Diſcutients (eſpecially the latter:) In Imitation whereof, I ſhall, with all due Submiſſion, offer this following Preſcription of my own.

Take Emplaiſter of Diachylon ſimple, Melilot, and Gum Ammoniacum, each half a Pound; Quickſilver twelve Ounces; Venice Turpentine and Oil of Bays, each two Ounces; liquid Storax one Ounce: Mix and make a Plaiſter according to Art.

The Melilot, upon the Score of its warming and emollient Faculty, which ought alway to go along with the Diſcuſſives, I have annexed to the Compoſition; and with the ſame View, where there is no Inflammation in the Caſe, nor Fear of a future Suppuration, I have, in lieu of the common Diachylon, ſubſtituted the *Empl. è Mucilaginib.* to good Advantage, eſpecially in reſolving and diſperſing the harder Concretions of the Tendons, Ligaments, and Bones, and alſo thoſe of the glandulous Parts (whether with or without

without a proper containing Capſula) yet herein 'tis left to the Artiſt's Diſcretion, to chuſe which of the ſaid Preſcriptions he beſt approves of.

Primion's Epulotick.

Take Sory (or in want of it Vitriol may be uſed) three Ounces; Roch Alum, Quicklime, and Pomegranate-bark, each two Ounces; Frankincenſe and unripe Gulls, each two Ounces and ſix Drams; Wax fifteen Ounces; Calves Suet one Pound four Ounces; old Oil as much as will make it into the due Conſiſtence of an Emplaiſter, which, according to the original Preſcription, is the *Roman Hemina*, or *Greek* κοτύλη, *viz.* about nine Ounces Oil-meaſure; tho' *Aetius* thinks it too little, and therefore adviſes a Pint, whereby it will endure the longer boiling, and conſequently become more compact and uniform than where the ſaid Oil is deficient in Quantity.

This Medicament (deſcribed by *Galen*, *Lib.* 4. *De Comp. Med. Secund. Gen. cap.* 6.) conſiſting chiefly of drying and aſtringing Ingredients, partaking ſomewhat alſo of a mordicating or biting Faculty, is moſt admirably well ſuited for edulcorating and correcting the corroſive acrid Serum of malign and rebellious Ulcers, conſtringing the Diameters of the dilated Ducts and Pores through which the virulent Humour iſſued, and laſtly, hardening the Surface of the lax and porous Fleſh into a firm and durable Cicatrix or Skin-like Covering: Whence *Guido Tagaultius* and *Paræus*,

Paræus, with other renowned Men, from *Galen* the chief of all, who beſt could judge on theſe Affairs, and beſt expreſs his Thoughts upon all Subjects, have uſher'd it in with exceeding great Commendations, telling us, that it excels all other Remedies in the Cure of deſperate Ulcers (of what Sort and Denomination ſoever,) inaſmuch as it hath healed beyond all human Expectation ſeveral malign and diuturnal Affects of the like Kind, that have been deem'd deplorable, and paſt all Hopes of Cure. So great is the Efficacy of this celebrated Medicament, which *Galen* and a long Experience (ſaith a very candid and judicious Author) hath taught us to be of moſt certain and approved Uſe, and therefore confidently may be depended on in the greateſt and moſt preſſing Occaſions; and this after a much eaſier Manner, than the fiery Trial propoſed by *Severinus* in the like Caſes.

An Emplaiſter to diſcover a Fiſſure in the Skull.

Take yellow Wax, Frankincenſe, Labdanum, each two Ounces; Bean-meal, Turpentine, and Vinegar, each one Ounce: Boil them gently together to a due Conſiſtence, which is to be ſpread upon Cloth and applied to the ſuſpected Part.

The Head being firſt ſhaved, as uſual in theſe Caſes, ſuffering it to reſt thereon for twenty-four Hours (ſaith *Fallopius*) then if upon removing

the ſame, it ſhall appear dryer in one Place than another, there ſhall you find the fiſſured or broken Bone: The Reaſon whereof *Fab. ab Aquapendente* attributes to the Heat exhaling from the internal Parts, which dries the Medicament ſooner in that Place covering the Fracture, than any where elſe: Although *Borellus*, *Cent.* 2. *obſ.* 20. informs us, that in the Place of Fractures the Medicine will not grow dry; which he makes good by the following Hiſtory: "A certain Perſon, "ſaith he, fell backward from on high, and re- "mained as if he had been quite dead; where- "fore, by the Advice of Phyſicians, his Head "was ſhaved and a Cataplaſm of the *Farin. Fa- "bar.* applied all over it; and becauſe the Caſe "required Expedition, that the Pultis might "ſooner dry, hot Cloths were adhibited there- "to for the Space of ſix Hours, in which Time "the Medicament being exſiccated and taken off, "the Figure of the latent Fiſſure was found plainly "delineated on it: For (continues he) the Ca- "taplaſm will not grow dry in the fiſſured or "fractured Places; and a great Fiſſure appear'd "under the middle of the crotaphite Muſcle.

Whether theſe Experiments will ſtand the Teſt in every particular Affect of this Kind, or extend to the minuteſt Chink, or capillary Fiſſure of the *Cranium*, is ſomewhat doubted: *Fallopius* and *Aquapendente* ſpeak ſlightly of it, and from them our Countryman Dr. *Read* takes Occaſion to ſay, that all thoſe Signs which are taken from the Moiſture of Plaiſters, *&c.* applied to the wounded Part ſhaved, are uncertain; though a little after diſcourſing

diſcourſing of the *Reſonitus*, or contra-Fiſſure, he orders an emplaſtick Medicament to be laid to the oppoſite Part (of the Blow receiv'd) for twenty-four Hours Space; and after it is taken away, if the muſculous Skin under it appear in any one Place more ſoft and humid than the reſt, it is very likely (ſaith he) that there the Fracture is a plain Intimation that the Author repoſed ſome Confidence in this Circumſtance. But be it ſo, or otherwiſe, and granting the Medicament may be fallible in ſome Points, (as what is not?) yet herefrom can ariſe no great Inconvenience, inaſmuch as it moderately dries and diſperſes the extravaſated Humours, (like to that famed Remedy of old preſcribed by *Hippocrates* for the ſame Intention, betwixt which and this there is a great Analogy) and therefore may commodiouſly be adhibited to various Affects of this Part: Yea, ſuppoſing there ſhould be a ſmall Crack or Fiſſure therein; yet if it be ſuperficial, and paſs no farther than the exterior *Lamina*, or Table of the Skull, and the ſubjacent Membrane be likewiſe void of Inflammation, Depreſſion, and other preternatural Accidents, which may partly be gathered from the preſent Symptoms, with other Circumſtances relating to the Hurt; there is then (ſaith the excellent *Fabrit. ad Aquapendente*) no need of dilating or perforating the *Cranium* and its Covering, and therewith expoſing the *Dura Meninx* to the Air to no Purpoſe. And of the ſame Mind is *Franciſcus Arcæus*, who in his Book *De rectâ Curandorum Vulnerum ratione* blames and condemns the Raſhneſs of thoſe Surgeons who o-

pen all Wounds of the Head with a large crucial Inciſion, in order to know whether it be broken or not; whence many Diſadvantages ſucceed, to the great Prolongation of the Cure, and Hazard of the Patient's Life, which otherwiſe by God's Bleſſing might happily be perfected in leſs than Half the Time. Whereto *Vidus Vidius* gives his Aſſent, when he tells us that *Peruſinus*, a famous Surgeon, did by long Practice obſerve, that more are ſaved by lenient and drying Medicines, than thoſe whoſe Skin is cut, and the Bone laid open. Which *Cornelius Celſus*, by his Authority, hath confirmed, ſaying, that the ancient Doctors healed more by the Way of Exſiccation and Incarnation, than by Inciſion and Elevation of the Bone. Whence *Scultetus*, being aſſured of the Safety of ſuch Practice in ſome Reſpects, ſaith, that they proceed without Reaſon, who in all manner of Wounds (and Contuſions) of the Head make a large Inciſion; for if there ſhould be a Fiſſure in the Skull, yet if it be ſufficiently patent for granting a free Diſcharge to the Pus or Matter, there is no need of perforating the *Cranium*, nor dilating the Wound with a Knife. Therefore rightly did *Chalmetæus* judge thoſe worthy of Cenſure and Reproof, who not only in every ſmall Fiſſure of the Skull, (although it do not penetrate deep) but alſo in a large one that is open enough, do boldly uſe the Trepan: By which no ſmall Error, the Cure is long protracted, to the great Damage of the Sick, and Diſgrace of the Phyſician. But whether this is owing to the Ignorance or Covetouſneſs of the Operator, is ſomewhat doubtful

doubtful. Thus this well-experienced Artiſt, who was never averſe to manual Operation where required, hath notwithſtanding here declaim'd againſt all thoſe who make a common Practice of cutting and boring upon every trivial Occaſion, which very often may well be ſpared. The Advantage of the one, and the Diſcommodity of the other, is well ſet forth by *Arcæus* after this Manner: "A certain Perſon (ſaith he) was ſtruck, "but not very violently, upon the Right *Bregma.* An unſkilful Surgeon being called in, laid "open the Wound, (when there was not the "leaſt Sign of a Fracture) with a cruciform Inciſion three Inches ſquare; whence it came to "paſs, that by the Uſe of his Digeſtives and "Oils, (together with the ambient Air) not only "ſo much of the Skull as was laid bare, but alſo "a great deal more on all Sides was corrupted, "and conſequently to be exfoliated and taken "out." Several the like Inſtances may be met with in the practical Obſervations of many other eminent Practitioners, who unanimouſly affirm that grievous Contuſions of the Skull may be cured by the Help of Medicines alone. *Marchetti* reports, that he ſaw a great Depreſſion of the occipital Bone in the Head of a little Girl, (occaſioned by a Fall backward down a Pair of Stairs) wherein neither Inciſion nor trepanning would be admitted by her Parents; and yet ſhe was cured by Medicines, (and the Strength of Nature) beyond all Expectation. "Therefore (ſaith he) we "need not be much afraid for Children thus bruiſed, by reaſon of the Softneſs of their Skulls."

And *Bartholine* farther aſſures us, that he has ſeen profound Contuſions cured without trepanning, only by applying the *Empl. de Betonica, &c.* The Reaſons urged in Behalf of Medicines for producing theſe good Events, are, 1. By them no more is waſted in the Parts, than what was occaſioned by the Blow; and therefore the Wound is ſooner healed than by the inſtrumental Procedure, which operates contrariwiſe. 2. Many Accidents ariſe upon opening the *Cranium*, that otherwiſe probably might never have happened. 3. Inflammations of the *Meninges* of the Brain are cured by Medicines, and not by manual Operation. 4. Experience demonſtrates that ſeveral extraneous Bodies have been extracted by proper Remedies, and why not the Sanies or extravaſated Matter be diſcuſſed, and drawn out by the ſame Means? 5. Sundry Examples produced by unqueſtionable Authorities, have proved that many have been cured by Medicines in very deſperate Caſes, whereupon a lately recited Author of good Credit cautions the young Surgeon againſt the too haſty proceeding with Inſtruments; ſaying, "If "it chance that upon a Blow or Fall on the Head "the Patient ſhould loſe his Underſtanding, "with a Deprivation of Senſe or Motion; yet "you muſt let alone all manner of Operation, "(as laying open and trepanning the Skull;) for "there is no Danger of Life, (if other grievous "Symptoms don't appear) having ſeen ſeveral "whoſe Head being hurt by ſome outward Ac-"cidents, and this Symptom only moleſting, re-"covered in a few Days." But allowing all this,

that

that many have been cured of Fractures in the Skull by the aforeſaid eaſy and gentle Method, eſpecially Children, and other admirably well-conſtituted Habits, wherein Nature in all Ages and Climates hath been known to work Wonders, yet muſt not the ſame be expected to hold good as a general Rule in all; ſince there is nothing ſtable in Medicine, whereon the ſame proſperous Succeſs can always be founded, and eſpecially in Wounds of the Head, which, as the learned *Kerckringius* obſerves, are more deluſive and uncertain than all others. Whence 'tis become almoſt a proverbial Saying, that Wounds of the Head ſeemingly ſlight and ſmall, are often the moſt perillous; and thoſe which appear fatal, are ſometimes, on the other Hand, the fartheſt from Danger. Whence *Hippocrates* delivered this Precept, that no Wounds of the Head, however ſmall, ought to be contemned, inaſmuch as they are equally ſubject to the ſame Peril and Danger. Thus *Fabrit. ab Aquapendente* obſerves, that although it be only a ſimple Inciſion of the *Pericranium*, yet ſeeing it draws its Origin from the *Dura meninx*, an Inflammation of the one may eaſily be communicated to the other; ſo that every ſmall Wound may verify the Text of *Hippocrates*, and become dangerous. The like Doctrine we meet with in ſeveral other approved Authors; particularly *Berengarius*, in his accurate Treatiſe *De Fractura Cranii*, avouches he has ſeen ſeveral Subjects, where neither the *Cranium*, nor the Pannicles, have been any ways damaged, yet by the Deſcent of *Sanies* (through the Pores of the

Skull) upon the Membranes, a Fever, Rigor, Vomiting, *Singultus*, and other ominous Accidents, have (by reaſon of the latent Putrefaction and Corruption) ſupervened, and at laſt Death it ſelf. "And herein, ſaith he, (addreſſing himſelf to the Reader) "you are not to wonder, al-"though the aforeſaid Accidents ſhould happen "when neither the Membranes nor Brain are "hurt, by reaſon they may proceed from the rup-"tured Veins or Nerves, and more eſpecially "when it chances that the *Sanies* ſome how de-"ſcends from above through a Fiſſure of the "Bone, or perhaps reſudes through the Poroſi-"ties thereof to the inner Part of the Skull." And this hath the illuſtrious Senator *Talpius*, from practical Experience, confirmed, in trepanning the Head of a certain Perſon; "Wherein (ſaith he) "we ſaw innumerable ſmall Drops of Blood "to iſſue out through the whole Bone, covering "like Dew the Surface of the Skull, which as of-"ten as they were wiped off with a Sponge, o-"thers continually repullulated." Pointing out to us at the ſame Time, that there is nothing impoſſible for Nature to permeate, (all Things being pervious thereto) neither are there any Bones ſo ſolid, but through them both Blood and Pus may freely tranſude: And therefore 'tis no Wonder that the lately recited Accidents ſhould ariſe from the broken Veins and Nerves, (as *Berengarius* will have it) when neither the Brain nor its Pannicles are primarily affected, neither any Fracture or Fiſſure in the Bone can be perceived; ſeeing the whole Body, as *Valleriola* juſtly remarks,

and

and conſequently the hard Parts, as well as the ſoft, are all perſpirable, and through them the extravaſated Matter may reſude, or fall back upon the Membranes, or probably may ſweat thro' the latent and undiſcovered Fiſſures, as was the Caſe of the unfortunate Perſon in *Talpius*, in whom the outward Table ſeemed unhurt, but the inward was full of Cracks; verifying that remarkable Text of *Fallopius*, *Quod rimæ iſtæ non apparentes, ſint cauſæ mortis*; and therefore this judicious Perſon gave this expreſs Charge, *viz. Si ergo ſimplex contuſio, & ſimplex rima, ſive manifeſta ſive occulta, ſemper aperiendum eſt os, præſertim ſi metus ſit diſruptarum venarum: Educitur quippe hac ratione, non tantum ſanguis effuſus; ſed impediuntur ſimul, Inflammatio, Putredo, Delirium, Febris, aliaque exitialia Symptomata.* But that we may do nothing raſhly in this Caſe, which *Hippocrates* himſelf hath forewarned us of, we are to conſider where the manual Operation is neceſſary, and where not. Firſt, then, if it evidently appear that the Skull is neither broken nor depreſſed, and that there is nothing which hurts the Brain, and the extravaſated Humour is ſmall in Quantity, as may be gathered from the Symptoms; or if there be a Chink or Fiſſure, provided it be ſufficiently open, to let the *Sanies* purge freely from it; then according to the Decree of *Hippocrates*, there is no need of torturing the Sick by Apertion, which refrigerates the Parts, and brings great Pain to the miſerable Patient. But on the other Hand, where the Circumſtances are contrary, or if there be great Quantity of *Sanies*,

and

and the ſubjacent Parts in Danger of Corruption thereby, the Brain or its Membranes any ways violated by the depreſſed Bone, and the Symptoms violent; then, by the Authority of the Ancients, we may ſafely proceed to manual Operation, which in theſe Caſes cannot by any Means be omitted, without incurring the moſt imminent Hazard and Danger. For we are not to commit the ſame to Nature, hoping ſhe may rectify thoſe Faults, for that is almoſt impoſſible; and if ever it ſhould happen, we may ſay with the learned *Jacotius* in *Comment. Coac. prænot.* that theſe good Events are ſuch, *quæ potius voluntate Dei, quàm arte eveniunt.*

A Pleuritick Epithem.

Take Spirit of Wine camphorated, two Ounces; Spirit of *Sal Armoniac* one Ounce: Mix them together, and embrocate therewith the pained Side.

Although in a true Pleuriſy external Remedies (of a hard and ſolid Form) are ſcarce ever ſucceſsfully applied, yet that the more liquid and ſpirituous Medicines are ſometimes available, is beyond Diſpute, ſeeing *Hippocrates* himſelf, in the Caſe of *Anaxion*, *Epidem.* 3. *ægr.* 8. applied a Fomentation on the ſeventh Day of the Diſeaſe; as likewiſe have many other Practitioners with tolerable good Succeſs, (due Revulſion and Evacuation being premiſed.) For, as a learned Author tells us, there are three principal Remedies in a Pleuriſy,

riſy, *viz.* Fomentation, Veneſection, and Purgation; the firſt, ſaith he, oppugns the conjunct Cauſe, and ſometimes alſo ſtops the antecedent; the two other take away the antecedent Cauſe, and therewith probably the conjunct. So that in this reſpect, external Medicaments ſeem to take place of the other; becauſe Bleeding and Purging is not convenient in every Pleuriſy, but Fomentation is; and if ſo (which I hardly believe) this volatile ſpirituous Epithem hath, thro' the Tenuity and Subtilty of its Parts, a much fairer Chance of reaching the Seat of the Diſeaſe, and reſolving the obſtructing Humours, than what can be expected from the fomenting Claſs. The Camphor and volatile Spirit being accounted Specificks in this Caſe, correct the coagulating Faculty of the vinous Alchohol, when in Contact with the animal Fluids, as on the other hand it again contemperates and infringes the acrimonious and fugitive Particles of the volatile Salts, that otherwiſe would be apt to paſs off too ſoon, or perhaps excite too great a Stimulus and Fluxion upon the Part affected; by which mutual Conjunction theſe Inconveniencies are prevented, and it is a far ſafer and ſurer Way of exhibiting theſe fiery alkaline Medicaments, than rationally can be hoped for from their internal Uſe, notwithſtanding the Authority of *Sylvius* and ſome others in their Behalf, who out of their Averſion to Bleeding, have ſet up their aromatick Salts and volatile Sudorificks in Oppoſition to that moſt excellent and uſeful Remedy, which by the general Conſent of the Learned ought never to be omitted

in

in inflammatory Diſeaſes, and more eſpecially thoſe of the internal Viſcera (ſome particular Circumſtances only excepted;) where, according to the Authority of the famous Dr. *Willis* (ſupported by Reaſon, Experience, and the Decree of the Antients,) we are to bleed freely if the Patient be ſtrong and have a big Pulſe; and this is far better (ſaith that ingenious Gentleman) to bleed liberally at firſt, and ſo on as Occaſion ſhall call for it, than to let blood ſparingly and little at a time; inaſmuch as a conſiderable Portion of the viſcous and ſlimy Blood is collected about the affected Part, which unleſs it be call'd away from thence by a plentiful Veneſection, and be ſuffered to flow out in abundance, the deſired Effect will not ſucceed. Therefore 'twas not incongruous to Reaſon, when the Antients preſcribed Blood-letting in a Pleuriſy even to ſwooning. For, as the learned *Heurnius* remarks, a great Diſeaſe requires that a great deal of Blood ſhould be evacuated; for here it matters not ſo much what Sort of Blood you draw, as in what Quantity: Whereof *Avicenna* proceeds ſo far as to affirm, that out of twenty-five Pound of Blood (ſuppoſed to be) contained in the Body, ſeventeen Pound may be poured forth in one Day without Deſtruction.

And *Galen* ſeems to have taken away ſix Pound of Blood at once, which verifies the Saying of the recited Author, that in a Pleuriſy, Peripneumony, and Quinſy, the Blood can never be drawn off too quickly and copiouſly while Strength remains; and that not only in the firſt Beginning of

of the Diſeaſe, but alſo in the Increaſe and very Height of it, if the Symptoms be very violent and indicate the Uſe and Neceſſity of it, as was the Caſe of the recited *Anaxion*, to whom *Hippocrates* preſcribed Veneſection on the eighth Day of the Diſeaſe, when the Fever, Pain, Cough, and difficult Reſpiration, was at the very worſt; where, by the Detraction or drawing off much Blood, the Pains, *&c.* abated, and on the eleventh the Fever became milder. Whence *Galen De Curand. rat. per S. M. cap.* 20. rightly ſays, that the Number of Days are not to be attended to as ſome have writ; but on what Day ſoever you ſhall find in the Patient Indications for Bleeding, uſe that Remedy, though it be even the twentieth Day from the Beginning. And 9 *Method. Med.* he ſays likewiſe that Blood may be let at any Time, but the ſooner the better. Which ſhews how little that erroneous Doctrine of *Petronius*, *Helmont*, and their Followers, is to be relied on, who have rejected Bleeding, and denied that any Benefit could be received from it in a true Pleuriſy. But they going upon miſtaken Grounds deceived both themſelves and others; and therefore their fanatical Opinion is juſtly exploded by the major and more learned Party.

For as that excellent Phyſician the late Dr. *Freind* hath judiciouſly obſerved, whoever perfectly underſtands the Nature of a Pleuriſy, will eaſily perceive, that immediate Relief may be had from opening a Vein in the Beginning: For upon this Point depends the whole Safety of the Patient's

Patient's Life, that if you ſhould (ſaith he) depart from this kind of Medicine, in vain will you ſeek it from any other; which he confirms from the Authority of *Aretæus*, the ſecond in Reputation next to *Hippocrates* (and *Galen*,) who ordered a Vein to be opened on the firſt Day. And even the primitive Father of all ſays, that they (*i. e.* pleuritick Patients) are very often cured by Bleeding and diſcutient Medicines, whereby it plainly appears that theſe latter are of ſome Efficacy and Force in diſperſing the conjunct Matter, when the former hath cut off the Fomes of the Diſeaſe, and therewith put a Stop to the antecedent Cauſe of it: But whether that may be attributed to the penetrating Effluvia of the Medicament reaching the obſtructed and inflamed Membrane, immediately acting upon the ſtagnating Contents, or mediately by accelerating and quickning the Blood's Motion in the proxime and adjoining Veſſels, or by the Stimulus of the Fibres communicated from the external to the internal Parts, is ſomewhat doubtful; although the noted Efficacy of Cupping-glaſſes with Scarification of the pained Side, ſeems partly to favour the latter: Which Method is frequently put in practice amongſt the barbarous *Indians* and the rude illiterate *Africans*, who immediately upon any Pain perceived in the Side, fix two or three Ventoſes with a large Flame to the grieved Part, and then afterward ſcarifie it with deep and large Inciſions, bathing the ſame with an Infuſion of *Indian* Pepper in ſome hot ſpirituous Liquor: So fearful are they of the approaching Danger!

Danger! Yet whether this is taught them by prudent Nature, or rather communicated to them by the *Europeans*, is what I cannot reſolve. But whetherſoever it be, 'twas the Counſel of *Aetius*, and 'tis by them put in Practice more than any where elſe, with all the minute Circumſtances propoſed by that celebrated Author; the Cupping, Scarifying, and Application of ſome acrimonious Medicament being wholly deſign'd to attract and draw out the offending Humours, and this with ſuch preſent Relief, that, be the Pain never ſo violent before, yet hereupon it preſently ceaſeth; ſo that it ſcarce ever needs any other Help or Remedy: And by ſomewhat a like Means may the volatile Diſcutients (uſher'd in by due Veneſection) afford Relief. Their ſharp, ſubtil, and ſaline Particles ſtimulate the Fibres to an Excretion of the contain'd Fluids, and thereby cauſe an Attraction (comparatively ſpeaking) like to the Ventoſe and Lancet with this Advantage, of reſolving and diſcuſſing the impacted and viſcid Humours inſenſibly and without Pain, which the other perform by a dolorifick and ſenſible Evacuation.

An Anodyne Frontal Epithem.

Take Roſe-water two Ounces; Vinegar one Ounce; Camphor half a Dram; Opium diſſolved one Scruple; Oil of Roſes one Ounce and a half: Mix them according to Art.

There are almoſt as many Varieties of theſe Frontals, as there are different Opinions in Men: Some

Some uſing only a Roſe Cake moiſten'd with Vinegar, and a little Nutmeg grated thereon; others an Oxyrrhodinum of their own compoſing; and others again preſcribe an Oxycrate with an Addition of *Laud. liq. & Camph.* for the ſame Intention. Yet all is done with the ſame View of abating excruciating Dolours of the Head, and compoſing Reſt and Sleep, when by long Watchings and continued Pains the Patient's Forces are almoſt worn out, and Life brought into Danger. Then, by the Conſent of the Learned, moderate external Opiates may be applied to the Forehead and Temples until we gain the deſired End, taking this Caution of *Heurnius* along with us, that we never apply Opiates to the coronal Suture, by reaſon the Brain lies much under it, and the Entrance thereto is eaſy; but rather to the Temples, Noſtrils, and Forehead: Neither in any Oppreſſion of the Spirits, as uſual in malignant Feavers, can they ſafely be adhibited; for which Remark, with many others worthy of Note, we are beholden to the judicious Dr. *Fuller*, who hath put this uſeful Diſtinction (in reſpect to the Uſe of Narcoticks) between thoſe Fevers ariſing from a Fervour and Rarefaction of the Blood, and thoſe of the malign Kind.

A Cardiack Epithem.

Take Borrage and Balm Water, each two Ounces; Hungary Water and compound Spirit of Lavender, each ſix Drams; Species Diambræ two Drams; Oil of Nutmegs, Cloves, and Lavender,

der, each ſix Drops; Cinnamon two Drops: Incorporate them with a little loaf Sugar, and make an Epithem to be applied to the Region of the Heart and Ventricle.

The grateful Odour and aromatick Effluvia ariſing from the active Principles of the odoriferous Bodies, renders the Medicament very acceptable to the nervous Genus, invigorating their whole Syſtem with a Supply of ſuitable Matter, when through an Eclipſe of the animal Spirits internal Remedies cannot take place; and therefore in Fainting, Swooning, Palpitation, malign Oppreſſions, and other Languors of the Heart, 'tis a very adequate and ſuitable Application: And as there is a great Sympathy between the Heart, Brain, and Stomach, ſo that when one of them is primarily affected, the other ſuffers by Conſent, (whence we ſee, that in Fractures of the Skull, Vomiting and Swooning ſucceed; and, *vice verſa*, in Diſorders of the Stomach, the whole animal Faculty languiſheth;) 'tis highly probable that this or the like corroborating Topick applied to the Regions of theſe lower Viſcera, may be available in Diſeaſes of the ſuperiour: In Confirmation whereof, *Oethæus* hath delivered us this memorable Hiſtory of himſelf. "As I was upon Recovery "from a malignant Fever that had caſt me into "a Lethargy, upon any ſlight Occaſion I uſed to "fall into Watchings, which preſently reduced "me to a very weak Condition; wherefore when "I was once brought into great Danger of my "Life, and perceived not only the Faculties of

" my Brain, but the Strength of my Heart to " be much waſted: I applied a cordial Epithem " to the Region of my Heart, and then compo- " ſed myſelf to Sleep; and as the Virtue of the " Epithem penetrated and corroborated the " Heart, I perceived as it were a certain Beam " or Ray aſcend from my Heart to the Brain, " which gave miraculous Relief to my Head, and " afterward I fell into a ſweet Sleep: After this " I perceived the ſame Experiment to hold good " in others. Which in my Opinion may be ex- " tended to apoplectick and epileptick Caſes " (which during the Paroxyſm admit not of in- " ternal Help from Medicines) with tolerable " good Succeſs, by acommodating the Nature of " the Medicament to that of the Diſeaſe.

A common vulnerary Fomentation.

Take Tops of St. John's-wort, Centaury, Wormwood, and white Horehound, each one Handful; Chamamil and Melilot Flowers each half a Handful; Bay Berries and Juniper each one Ounce: Boil them in a ſufficient Quantity of Water to the Conſumption of a third Part; then ſtrain off the Liquor, and add about four Ounces of rectified Spirits to each Pound of the Fotus at the Time of Uſe.

Out of the great Variety of Fomentations that occur in the Cure of Wounds and Ulcers (wherein the different Nature and Quality of the Affect itſelf, together with the attending Accidents and Diſtem-

perature of the adjacent Parts, indicate a different Remedy, that may correſpond with each) to avoid Prolixity and Multiplicity of Medicaments, I have ſet down this conciſe *Formula*, to ſerve as a Pattern for all the reſt of this Claſs, which with a little Variation may be ſuited and altered according as the preſent Circumſtances ſhall direct: For Example, in a ſordid and putrid Ulcer, wherein a greater Detergency is abſolutely neceſſary to wipe out the adhering Lentor, a ſtrong *Lixivium* of Wood Aſhes may very well be ſubſtituted, in Lieu of the common Water, with an Addition of the *Mel Ægyptiacum*, if the Caſe require it; and if more powerful Diſcutients be thought requiſite, as in Ulcers attended with a cold Intemperies, then a Portion of ſome of the hotter aromatick Plants, with an increaſed Quantity of the carminative Seed and Berries along with the camphorated Spirit, will be highly neceſſary to rouze up the languid Heat, and ſet open the Pores for the Crudities to tranſpire and paſs off by; and again, where a humid Diſtemperature affects the Part, the Uſe of Aſtringents is indicated along with the Diſcutients, to dry up and evaporate the ſuperfluous Humours, and therewith corroborate the Tone of the Member, and enable it to expel and throw off the offending Contents; for which Intention, the *Flor. roſ. Rub. Balauſt. Cort. Granat. Nuc. Cupr. &c.* are uſually introduced amongſt the hotter Simples; as, on the other Hand, a contrary Quality is indicated where a dry Intemperature moleſts the Ulcer. For which, *Galen*, and the ancient Phyſi-

cians, preſcribed warm Water and *Hydrelæum* to humect and relax the dry and rigid Parts, and with the ſame Deſign of calling down the nutritious Humours, the emollient Simples have generally a Place in this Intention, being admirably well ſuited for this Work, and even conducing more towards it than is often deſired. And therefore Practitioners have put in this Caveat of fomenting the Parts no longer than they begin to grow red, and tumify a little.

A Repelling Gargle in a Quinſy.

Take Plantain and Roſe-water, each two Ounces; Honey of Roſes one Ounce; *Sal. Prunel.* half a Dram; Spirit of Vitriol as much as will give it a ſmart Acidity.

Wherewith gargle the Throat and Jaws in the firſt Beginning of the Inflammation; for at that Time only Repellents are of Service in this Diſtemper; and even then are ſomewhat ſuſpected by ſeveral of the modern Phyſicians, particularly *Proſper Martian* exclaims againſt them as a dangerous Practice; telling us that they induce a certain and ſpeedy Suffocation in the Quinſy, ariſing from a viſcid Matter, inaſmuch as it gives no Place to Repulſion; but being inſpiſſated and more impacted thereby in the Part, is rendered wholly incapable of Reſolution or Diſcuſſion; and in that proceeding from a ſharp thin Matter, although they be not quite ſo dangerous, yet even there they do more Hurt than Good: For ſeeing they

can't repel upwards the Humours deſcending from the Head, when forced either upon the internal Muſcles of the Throat, or tranſlated upon the Lungs, by this Method the Diſeaſe is rendered more dangerous; and therefore the Advice of *Hippocrates* (whom all the Ancients followed) is much better, who thinks it good to abſtain from Repellents in all Sorts of Quinſies, and at all Times, and inſtead thereof to uſe Rarifiers and Diſcutients, that the Matter may more eaſily be raiſed by Spitting, and be driven outward and diſcuſſed. "Nor is there any Fear (ſaith he) the "Fluxion ſhould be encouraged and augmented, "ſeeing that is averted by Bleeding, and other "Remedies reſpecting the fluent Matter." And if at any Time *Hippocrates* would have ſome Aſtringents mixed with his Medicines, when the Matter is thin, he does it not with a Deſign of repelling, but that by their drying Virtue too great a Laxity of the Part might be avoided, and that he might diminiſh the Tumour. Therefore (concludes our Author) he approves the Uſe of them rather in the Beginning, than at another Time. Whence *Etmuller*, in favour of this Doctrine, preſcribes reſolvent and diſcutient Medicaments from the firſt Beginning; and *Walæus* inclining to the ſame Opinion, affirms, that the extravaſated Humours, or thoſe infixed in the Parts, cannot be repulſed by reaſon of their Viſcidity; and therefore the Practitioner muſt render them fluxile by hot Medicines: For which Intention, if any one, taken with a Quinſy, do in the firſt Inſult of the Diſeaſe gargle himſelf with Spirit of Wine,

all Inflammation of the Throat will ceaſe in three Hours Time. But notwithſtanding, there are ſome others, of no leſs Note, who adhere to the contrary Practice; even the famous Profeſſor *Waldſchmidt*, who otherwiſe an Enemy to Repulſion, doth (after he had condemned the Uſe of Repellents externally applied, as of dangerous Conſequence, by throwing back the Humour upon the inward Parts, and thereby increaſing the Tumour) allow of repelling Gargles in the firſt Inſult of the Diſeaſe, by reaſon they repel to other Parts, (if detained in the Mouth) and drive the Humour outwards, eſpecially if aſſiſted at the ſame Time by reſolving and diſcuſſing Medicines externally applied, which (ſaith he) ought to be of warm Parts, that they may open the Pores, and attenuate the groſs Humours in order for their Diſcuſſion.

The like regular and rational Practice (of treating inflammatory Tumours of this Sort) deduced from *Galen*, we meet with in the excellent Works of *Hollerius*, *Sydenham*, *Riverius*, and ſeveral other candid and judicious Authors, who alſo have preſcribed this cautionary Rule, of calling outward the morbifick Matter, by ſuitable attenuating and reſolving Medicaments externally applied, whilſt we are endeavouring its Propulſion by a contrary Quality on the Inſide: And leſt ſome Inconvenience ſhould ariſe from a Commotion of the inflamed Parts, by the Uſe of the Gargle, when agitated to and again according to the common Method, they no leſs prudently have ordered the Medicament to be detained in the Mouth

and

and Jaws without Motion, until it begin to grow warm, and then ſpit forth, renewing it as often as there ſhall be Occaſion; which if it don't ſucceed, as may be gathered from an Increaſe of the Symptoms, inſtead of a Diminution or Abatement, then diſcutient Medicaments are to be mixed therewith, (according to the general Method preſcribed in the Cure of phlegmonous Tumours of other Parts) even to the very Height of the Diſeaſe; wherein *Riverius* will have Repellents ſtill to have a Share, on account of the ſoft and lax Nature of the inflamed glandulous Parts, which otherwiſe would be more relaxed, and conſequently diſpoſed to receive a greater Fluxion.

An Emollient Gargle.

Take Barley-water two Pound; Liquorice and Marſhmallow Roots, each half an Ounce; Quince Seeds bruiſed two Drams: Boil them to the Conſumption of one Half, and add to the ſtrained Liquor, Syrup of Raſpberries four Ounces. Mix, and make a Gargle.

The mollifying and relaxing Faculty of this Medicament, plainly denotes its Uſefulneſs, in ſoftening and taking off the viſcid cruſtaceous Matter over-ſpreading the Tongue, Mouth, and Jaws, in burning and malignant Fevers; wherein by reaſon of the latent *Ulcuſcula*, or Excoriations ariſing from the aduſt and vitiated *Saliva*, the ſubjacent Parts are parched, fiſſured, and rendered exceeding tender, and therefore cannot bear the

ſtronger Remedies without great Annoyance: As *Screta*, in his accurate Treatiſe *De febr. Caſtrenſ. malig.* hath rightly obſerved, ſaying, that all acrid, acid, and ſaline pungent Medicaments, ſuch as Nitre, Chalcanth, Spirit of Vitriol, and Sulphur, Allum, Vinegar, Diamoron, and, in general, all acid Syrups, are plainly detrimental, and ought utterly to be eſchewed in this Caſe, (inaſmuch as they exaſperate the recited Accidents;) and for that Reaſon he adviſeth emollient humecting Medicines to be uſed in their Stead. Whence our Countreyman Dr. *Fuller* delivers this Axiom as a ſtanding Rule in Practice, that where the Parts are excoriated, tender, ſmarting, dry, parched, and fiſſured, Mucilages and Emollients are moſt commodiouſly adhibited, and are truly a much better Remedy in a Courſe of Salivation than the blue Milk or Barley-water uſed in the cheap Cure of the Pox for the ſame Deſign; which latter only dilutes the Salts, but does not ſheath their Aſperities, nor ſmooth the Paſſages ſo effectually as theſe mollifying mucilaginous Medicaments are well known to do, to the great Eaſe and Benefit of the Patient.

A Liniment for Ambuſtions.

Take Mucilage of Quince Seeds, and Fenugreek extracted in Roſe-water, four Ounces; Oil of Linſeeds and Elder, each one Ounce: Mix them well together with the Yolk of a new-laid Egg, and make a Liniment; whereto one Scruple of Saffron may commodiouſly be added,

ded, upon the Account of its anodyne Faculty, which in theſe Caſes is much required.

Though there are ſeveral Remedies preſcribed for this Uſe, yet they all tend either to the Extinction and Suffocation of the *Empyreuma*, or preternatural Heat left in the Part by the Fire, or for the Reſolution and Diſſipation of it.

The former is effected either by cold and humid Medicaments, ſuch as the Juices of Lettice, Houſleek, Plantain, Nightſhade, and the Compounds prepared from them; or by cold and dry Things, as Bole, Ceruſs, Litharge, ſealed Earth, and ſuch like emplaſtick Medicines, which ſtop the Pores, and thereby extinguiſh the extraneous Heat. The latter, contrariwiſe, diſſipates the inflammatory Affect, by opening the Pores, and diſcuſſing the igneous Atoms lodged in the Fleſh, by virtue of an actual or potential Heat. Thus ſuperficial Burnings are cured by holding the affected Part near to the Fire, or embrocating the ſame with ſome ſpirituous Subſtance, until the ſmarting Heat and Pain entirely vaniſh; which Method, Experience tells us, is more eligible than the foregoing. For as *Sennertus*, *Pract. lib.* 5. from *Hildanus*, obſerves, the ancient Axiom of *Contraria contrariorum eſſe remedia*, is fallible in this Point, inaſmuch as Burns are not cured by cold Things, which rather repel the igneous Particles inwards, and by that Means increaſe the Pain and Inflammation of the diſeaſed Part; whereas, on the contrary, hot Things attract and draw outward the fervid Atoms, and thereby do

a great deal of Good: For even the common People very well know that the burnt Places muſt not be put in cold Water, but rather held a while to the Fire; for the Similitude or Likeneſs of Qualities cauſeth Attraction, and the external Fire draws out the internal, proving thereby a Remedy againſt the Diſeaſe it cauſed and bred. To reduce which to Practice, we are to conſider the Degree of the Ambuſtion, according to the Rules preſcribed by that well-experienced Artiſt *Fabric. Hildanus*, who in a particular Treatiſe upon this Subject, hath divided them into three Degrees or Orders, wherein a different Remedy is required in each.

The firſt is a ſimple and ſuperficial burning, affecting only the *Cutis* with an inflammatory Bluſh or Redneſs, yet attended with an acute and pricking Pain, (like as when the Skin is ſmartly nettled) whereto immediately ſucceeds ſmall Veſicles or Bliſters (if not timely prevented) replete with a white and limpid Water. For the hindering of which, this accurate Artiſt preſcribes a Mixture of Soap, Onions, and Salt, well beaten together, in order to attract the *Empyreuma*, or fiery Particles lodged in the Fleſh. But this (tho' it muſt be allowed an effectual Remedy) is notwithſtanding ſomewhat inferior to the famed Spirit of Wine propoſed by Dr. *Sydenham* for this Intention. The ſecond Degree of Uſtion is more vehement, wherein the Part immediately, and even that very Moment, becomes inflated, pained, rubified, and bliſtered, containing within the ſaid Veſicles a ſharp, ſubtil, and yellowiſh Serum, cauſing

cauſing a tenſive and burning Pain, ariſing partly alſo from the Contraction and Shriveling of the Skin, and occluding the perſpiratory Pores wherethrough the aduſt Recrements ought to paſs. And therefore the Cure is not to be attempted and begun with the former acrid Medicaments, that would exaſperate and increaſe the Malady, but rather with the humecting and mollifying Claſs, which have the Faculty of relaxing the cutaneous Fibres, abating their Tenſion and Stiffneſs, and conſequently the Pain thereon depending, and finally reſolving and diſperſing the acrid and fervid Humours, the Puſtules in the Interim being firſt cut or torn open with the Forceps, or ſuch like Inſtrument. The third and laſt Degree is the moſt intenſe and violent of all; wherein the ignited Inſtrument adheres to the Part, inferring a black or livid Cruſt, like to the actual Cautery, which upon its Separation uſually leaves a profound and putrid Ulcer behind.

The curative Method of which is performed much after one and the ſame Manner, by dividing the Eſchar in ſeveral Places to the quick, and then applying emollient digeſtive Remedies, to promote the Separation of the burnt Fleſh, and haſten forward the Converſion of the ſharp Serum into Pus: For which Intention, the foregoing Liniment may be uſed, (either *per ſe*, or mixed with Baſilicon, as the Circumſtances ſhall direct) even to the laſt End of the Cure; its mollifying relaxing Faculty abating the moſt urgent Symptoms, and alſo preventing an unſeemly Cicatrix, as *Foreſtus* teſtifies to this Effect. " A Boy of

" mine

" mine (ſays he) fell into the Fire, and grievouſly " burnt his Eyes; but after I had anointed him " with the Mucilage of Quince Seeds extracted " with Roſe-water, the Child recovered to a Mi- " racle, without any Mark of Burning; which " Remedy I have alſo uſed with Succeſs in others." So true is the Remark of *Hildanus*, that vehement Deſiccatives in Ambuſtions, are not only very painful, but alſo cauſe a rugged and filthy Cicatrix; but Emollients acting contrariwiſe, are preferable in theſe greater Degrees of burning, thro' the whole Stage of Cure.

A Volatile Diſcuſſive Liniment.

Take Spirit of Sal Armoniac tartariſed, Spirit of Wine camphorated, each an Ounce; Ointment of Marſhmallows two Ounces: Mix them together for Uſe.

I have often experimented the Efficacy of this Medicament in rheumatick Caſes, and always found it (due Evacuation by Phlebotomy, *&c.* being premiſed) to do a great deal of Good, in appeaſing the Vehemency of the Pain, relaxing the Tenſity and Hardneſs of the Fibres and Membranes, diſcuſſing the inflammatory Heat and Swelling, and finally ſetting at Liberty the impriſoned Matter; which generally is beſt effected by Volatiles conjoined with ſuitable mollifying Diſcutients, the Subtilty and Activity of the one operating upon the contained Humour, whilſt the lubricating and demulcing Faculty of the other

exerts

exerts its Energy upon the containing Parts, and by that Means prevents thoſe Inconveniences which might ariſe from an Exceſs of Quality on either Hand: Whence that wary Practitioner *Raymund. Jo. Fortis*, falling in with the common Opinion, that unctuous Medicines ſtop the Pores, and hinder Tranſpiration of the Part affected, wiſely ordered ſome Spirit of Wine to be added thereto, as a ſuitable Corrector of the oleous Faculty, and alſo to make the Medicine penetrate the better. In the Uſe whereof (and generally all other volatile and ſpirituous Applications) it is to be obſerved, that they never ſhould be adhibited warm to the Part affected, whatever the Nature of the Diſeaſe may ſeem to indicate; inaſmuch as the adventitious or actual Heat diminiſheth the potential, and therewith diſſipates the moſt fugitive, ſubtil, and beſt Parts of the Medicament.

An Hæmorrhoidal Liniment.

Take *Populneum* Ointment an Ounce; Sugar of Lead one Dram; Camphor diſſolved (in a few Drops of Spirit of Wine) one Scruple; Liquid Laudanum two Drams: Mix and make a Liniment.

The anodyne diſcuſſive Quality of this Medicament, renders it very ſerviceable to allay the Heat, Pain, Tenſion, and other Accidents attending this Diſtemper: It reſerates the obſtructed Tubes, attenuates, rarefies, and makes fluid the ſtagnating feculent Humours, cauſing their thinner Portion, or

or fervid Effluvia, to exhale, and the groſſer or more florid Blood to paſs on in its proper Channels, and at the ſame Time reduces the dilated Tubes to their uſual Size and Dimenſions, without incurring the Danger of relaxing the conſtrictor Muſcle, or *Sphincter Ani*, by the unctuous and narcotick Quality of the Compoſition, whereof *Reinerus Solenander* was afraid, when in his *Conſil. Medic.* he tells us, that opiate Liniments muſt cautiouſly be uſed, leſt the Podex being too much refrigerated by Narcoticks, ſhould not perform its Office. But this, with the Objections of *Wedelius* againſt Ointments in this Caſe, is obviated by the ſubtil and heating Quality of the Camphor, and the moderate Aſtriction and Exſiccation lodged in the Sugar of Lead; which makes it equally beneficial with the *Philonium Tharſenſe* deſcribed and uſed by *Avicenna* for the ſame Intention, and ſeems to ſtand as fair for removing the Swelling, by drying and diſcuſſing the influxed Matter, as either the new *Theriaca*, or Mithridate, commended by a lately recited Author.

A Lotion for a Gangrene.

Take White Wine one Pint; *Ung. Ægyptiacum* an Ounce: Mix them together for Uſe.

This is the uſual and common Medicament for waſhing the Scarifications of a gangreen'd Part, which in its firſt Attack, when the Place begins to grow black, may be uſed to Advantage; for in that Stage there is no better Remedy than to make

make ſundry and deep Scarifications therein, even to the quick, as *Vigo*, *Lib.* 2. *De Apoſtemat. cap.* 17. wiſely hath appointed, and afterward waſhing the ſame with this or ſome other ſuitable *Lixivium*, wherein a good Quantity of Lupins have been boiled, whoſe Efficacy this Way is much commended by *Galen*, *Paulus*, and *Avicenna:* And Experience tells us, that no leſs Praiſes are due to the *Ung. Ægyptiacum*, either uſed ſimply, or diſſolved in a convenient Menſtruum; having the Authority of *Hildanus* to witneſs in its Behalf, who terms it a moſt excellent and principal Remedy in a Gangrene: For it ſeparates the dead Fleſh from the living, and breeds a laudable Eſchar, and this with more Safety and Certainty than the acid Spirits and cauſtick arſenical Powders preſcribed by ſome Practitioners for this Deſign.

An Epulotick Malagma.

Take Powder of burnt Oyſter-ſhells, burnt Lead, *Lapis calaminaris*, and prepared Tutty Stone, each an Ounce; burnt Allum and Colcothar, each half an Ounce; Quick Lime often waſhed and dried, two Ounces; Amalgama of Lead, with Mercury, an Ounce and a half; white Lead two Ounces, with a ſufficient Quantity of Hog's Lard, (or rather Ointment of Roſes:) Make a Malagma according to Art.

This is one of the beſt of Medicines for correcting the Virulence of malign Ulcers, and ſkinning them over with a firm and durable Cicatrix, where

where moſt other Remedies have failed, and is much ſuperior to the *Empl. Saturnin. Batean.* wherewith it has a great Reſemblance in Form and Manner of Operation. The abſorbing alkaline Powders deduced from the metalline and foſſil Claſs, are the moſt adequate and effectual Remedies in obtunding, altering, and edulcorating the corroſive ſaline Particles of the depaſcent and eating Humour, as *Guido* from the Prince of Phyſick hath excellently well remarked, whilſt the aſtringing and exſiccating Faculty of the other ſerves to dry up the ſuperfluous Humidity, and harden the Surface (by cloſing and ſealing up the ſecretory Conduits of the ſerous Gleet) into a proper and ſkin-like Covering: The Amalgama in the Interim contributing, like the famed mercurial Plate, to depreſs and lay level the too prominent and pouting Margins, whereby the Cicatrix will become not only more even and ſeemly, but alſo more ſtable and laſting; for it may be received as an undoubted Axiom, that the more ſmooth and level this new-made Tegument is laid, the more firm and durable it will be; as on the other Hand an unequal and rugged Cicatrix threatens a freſh Eruption.

The common Digeſtive Mixture.

Take Venice Turpentine an Ounce: Diſſolve it with the Yolk of an Egg, and add thereto Saffron in Powder, a Scruple. Mix.

Some add a little Wheat-Flour hereto, and others

thers a Portion of *Engliſh* Honey, whereby it becomes a little more deterſive, and then it aſſumes the Name of *Mundificativum Paracelſi*, ſerving equally for both Intentions.

The Mundificative of Paracelſus.

Take clear Turpentine, and clarified Honey, each half a Pound: Incorporate them with the Yolks of three Eggs, and make a Mixture, which, if Neceſſity require, may be acuated with a little red Precipitate at the Time of Uſe.

As the latter End of Digeſtion always uſhers in Deterſion, ſo this Mundificative is deſigned to ſucceed the former, being ſomewhat more cleanſing, yet void of any notable Acrimony or Sharpneſs, and therefore is moſt proper for ſimple Ulcers, where the Matter is laudable, and ſmall in Quantity, which it deterges and wipes out with all the imaginable Eaſe and Gentleneſs, cauſing no Pain, nor ſmarting Heat, like to the ſtronger and more acrid Compoſitions; neither does it encourage or promote the Growth of looſe Fleſh, as the unctuous and ſlabby Dreſſings too frequently do; but leaves a firm and ſolid Baſis for the Work of Incarnation, which in well-conſtituted Habits it will no leſs effectually perform: And if there be Occaſion, a little of the ſarcotick Powders may be added to it, to forward that Intention.

Odontalgic Pills.

Take Opium and Camphor, each two Grains; Oil of Guaiacum and Cloves, each one Drop; Make them into four Pills for Uſe, whereof let one be put into the hollow (or upon the) pained Tooth, until the Pain ceaſe.

Several Practitioners doubt whether Opiates can ſafely be applied to the Teeth: *Alexander Benedictus* reports, that a *Venetian* Senator, to appeaſe the Violence of the Pain, would caſt himſelf aſleep by putting in ſome narcotick Oil to the Tooth; but inſtead of the deſired Reſt, he met with Death. And *Crato* upon *Scholtzius* puts this Slur upon Narcoticks in this Caſe, ſaying, that although they always take away the Pain, yet 'tis never without Hurt to the affected Part, or ſome other near it. But here 'tis only to be underſtood when they are uſed immethodically and irrationally, without their due Correctors; for when they are mixed with warming Diſcutients, never any ſuch Thing was known to happen; the one abating the Symptom, and the other removing the Cauſe: Which ought always to go Hand in Hand, as *Fienus* hath rationally adviſed, who although he does not allow of Stupifiers uſed ſimply, or by themſelves, inaſmuch as they congeal and thicken the offending Matter; yet wiſely concludes, when they are corrected by Heaters, they are a very ſafe and effectual Remedy, and cauſe no Intemperature in the Part worth ſpeaking of:

And

And I from my own Experience can affirm, that amongſt the great Variety of Remedies that are every where to be met with for this Uſe (having too much Occaſion to make Trial of them myſelf till within theſe late Years) I could never yet meet with any thing that for Quickneſs, Safety, and Certainty of Operation and Effect, came up to this.

Hydragogue Pills.

Take Colocynth, Gamboge, Aloes, Scamony, each one Ounce; Oil of Cloves and Juniper, each one Dram; with a ſufficient Quantity of Syrup of Buckthorn make a Maſs; whereof the Doſe is from one Scruple to half a Dram or two Scruples.

'Tis the general Conſent and Opinion of Phyſicians, that univerſal Evacuations ought alway to precede Particulars; and therefore I have given theſe draſtick or ſtrong purging Pills, to drain off the vicious Humours that might cauſe (or prolong the Cure) of a Diſeaſe, for which 'tis no contemptible Medicine, eſpecially in robuſt Habits, or thoſe of an hydropical Diſpoſition (while the Viſcera are firm and ſound) wherein ſmart Hydragogues are more required than in any Caſe elſe, according to the Authority of *Willis* and *Sylvius*, who tells us, that as often as the whole Maſs of Blood abounds with a watry Excrement, it ought to be freed therefrom by Degrees, the Evacuation of the ſame being often

repeated, both by Stool, Urine, and Sweat; for while the Bowels retain their due Tone, and are well conſtituted, the cathartick Particles of the Medicament can do them no Hurt; but being delivered into the Maſs of Blood, they preſently exagitate it, and ſtir it up to an Excretion of the ſuperfluous Humours, and alſo by irritating the Mouths of the Arteries opening towards the Guts, afford a Paſſage to the morbid Lympha to be drained off thereby; whence the Water fluctuating in the Blood being thus plentifully waſh'd away, the intercutal Serum will be re-abſorbed by the emptied Veſſels, and finally expurged by Urine or Sweat, and this more effectually by ſtrong Catharticks than weak ones; which, as our famous *Sydenham* obſerves, do often more Harm than Good, and for that Reaſon adviſes the Water to be drawn off as faſt as the Strength of the Sick will bear, leſt by the too long Delay or Intervals of Purgation, a freſh Collection might be gathered. And of the ſame Opinion is *Proſper Martian*, who diſlikes the gradual or intermitted Evacuations, not only in this Caſe but ſeveral others, condemning thoſe who give a Purge every fourth, fifth, or ſeventh Day; for this way, ſaith he, the Medicine will only on the firſt Day evacuate what is contain'd in the firſt Paſſages, and before the ſecond Purge comes the ſame Excrement will be collected again therein; and ſo in like manner it will happen in the reſt, whereby it comes to paſs, that the Virtue of the Medicine reaches not the Seat of the Diſeaſe which we intend to cleanſe: Wherefore 'tis better we purge without Inter-

Intermiſſion, that at leaſt the ſecond, third, or fourth Doſe may reach the Part affected, and leſſen the Fomes of the Diſeaſe; by which Method many are more happily cured of the greateſt Maladies than by any other Remedy. Hence in Diſeaſes of the Head, Breaſt, Lungs, Diſeaſes of the Joints, inveterate Obſtructions, Madneſs, *&c.* this ſort of Purgation is more ſafe and profitable than any other: In which Diſtempers it is fitting to take ſome Purge for ſeven or eight Days together, in order to exhauſt that which is impacted and ſtuffed up in the inward Receſſes or more hidden Parts of the Body without any Detriment to the Faculty. Thus the celebrated Author delivers his Opinion of rooting out the moſt inveterate and chronical Diſtempers where ever ſituate, by means of repeated Purgings, which is well ſeconded by *Jo. Walæus* in his *Meth. Med.* ſaying, "It is falſe that all extravaſated Humours "cannot be evacuated; for granting the groſs or "viſcid are incapable hereof, yet 'tis not ſo of "the thinner, which are ſignified if they yield "to the Impreſſion of the Finger: Whereſoever "then the Blood circulates, there I can alſo evacuate; yea, Purging is convenient even in "the Cavities, which ſeem to be a fourth Region, as in the Abdomen, Breaſt, *&c.* (pointing "out thereby the Neceſſity and Uſefulneſs of "Purging, not only in an Aſcites, but in a Dropſy of the Breaſt;) and this, ſaith he, Experience teaches, though there be no Circulation "of the Blood therein." And *Galen* by his Authority farther confirmeth in 13 *Meth.* 9. and

Lib. Art. Med. 95. and in other Places, that Humours extravaſated or caſt out of the Veſſels, may return into the Veins again. Yet from hence it does not follow, that Purging may be uſed indifferently in every Affect and Habit; for that is unreaſonable, ſaith *Mercatus*, to adminiſter Catharticks without Diſtinction; nay, even ſometimes we muſt abſtain from the Uſe thereof altho' the Body ſhould be full of evil Humours: For ſome Habits, if they ſhould be purged for a whole Month together, would never be pure, as we ſee in cachectick and phthiſical People, who can't bear purging without great Damage, and yet may live for ſeveral Years without theſe Evacuations, as *Crato* upon *Scholtzius* hath well remarked, and might farther be illuſtrated by an Example given by *Horſtius*, *Lib.* 9. *Obſ.* 25. of a certain Perſon, who minding to cleanſe his Body in the Spring, took a violent Purge, whereupon a Tranſlation of the Humours was made into his Right Foot (formerly weakened by a vehement Cold,) which by the Malignity and Plenty of the ſaid Humours ſuffocating the weak Heat of the Part, brought upon it a ſudden Gangreen. So dangerous, ſaith our Author, is it to attempt with churliſh Medicines, Bodies that are replete with impure Humours, and are either weak by Nature, or have been made ſo by ſome external Accident. Whence *Valleſius* made this prudent Reflexion, That ſome Bodies are much hurt by purging Medicines, as having the Excrements drawn to ſome inward Part that is affected, or moved and exagitated all over the Body. And a little

little after, the ſaid Author proceeds to ſhew, where Purging in theſe Caſes is neceſſary, and where not, ſaying; "Thoſe who labour under Diſ-"eaſes of ſome Parts, depending on ſome vicious "Matter, are then moſt helped by Purging when "a Cacochymick of the whole Body feeds the Diſ-"eaſes that are in the Part: But when the Hu-"mours are already infixed in the Part, and the "reſt of the Body clean, we muſt rather truſt to "particular Remedies, good Diet, and the Benefit "of Time, than to univerſal Evacuations; for the "Bodies of ſuch as are ſound endure Purging ill." A noted Inſtance whereof *Borellus*, *Cent.* 2. *Obſ.* 45. affords us, of a certain Miniſter, who in his Health would needs take a Purge, whereby his Humours were ſo preſently diſturb'd, that he died a few Days after. For when vicious Humours (as he ſaith) are wanting, theſe Remedies diſturb the Good. Therefore *Bartholine* being doubtful of this Matter, gravely concludes, that it is very dubious and uncertain to gueſs at a fit Time for giving purging Medicines. "The Phy-"ſician, ſaith he, is often ignorant of the Motion "or Orgaſm of Nature; whence, when ſhe is ſpon-"taneouſly preparing herſelf for the Expulſion of "noxious Humours, if the Phyſician, being igno-"rant thereof, give a Purge, the Patient is caſt "into Danger of his Life:" Which he confirms by an Example; and then at the Cloſe of it, makes this juſt Reflexion, "That altho' the ſame fatal "Accident might have happened without taking "any Purge at all (it being only a Decoction of "Senna and Prunes, that threw the Patient into an

" Hypocatharſis, and thence into a Dyſentery and " Death;) yet when Matter is accumulated, it " may be ſtirred up and compelled to Expulſion " upon the leaſt Irritation, and thereby produce a " fatal and unexpected Event." Now ſeeing it is proved from unexceptionable Authorities deduced from Fact, that this ſort of Evacuation holds the Ballance of Health and Sickneſs, if not of Life and Death, according as it is judiciouſly or prepoſterouſly uſed, and that very often in chronical Affects where leaſt Danger is dreaded; what then ſhall we think of it? or with what Caution muſt it be gone about by young Beginners in acute Diſtempers? wherein the minuteſt Error precipitates the Patient into the moſt imminent and irretrievable Danger; and more eſpecially here, when the Humours are put upon a violent Commotion and Fermentation by means of the ſtimulating and heating Particles of a cathartick Medicament; 'tis what has employ'd (as a Subject of the greateſt Importance) many of the moſt learned Heads, and yet the Matter hangs in Suſpence, the Controverſies and Diſputes that have been raiſed about Crudity, Turgeſcency, and Concoction, in relation to the Time of Purging, being yet undecided: And although the learned *Walæus* makes little of it, and thinks the Buſtle about the 22^d *Aphor.* of the firſt *Sect.* of *Hippocr.* is not ſo very abſtruſe as Phyſicians would have it; yet *Valleſius* and *Pr. Martian*, two accompliſh'd Authors, are of another Mind. But to avoid any farther Prolixity, I ſhall refer the Reader to their learned Works, wherein he may meet

meet with full Satisfaction and Contentment. And if I may be allow'd to make Choice, I ſhould recommend *Fr. Valleſius*, who has wrote as elegantly, copiouſly, and learnedly upon this Subject (with many others) as any I know of.

The Edinburgh *Ecphractick Pills.*

Take Gum Ammoniacum diſſolv'd in Elder Vinegar nine Drams; Myrrh, Frecula, Bryony, each two Drams and one Scruple; Senna, Agarick, each one Ounce; Tartar Vitriol three Drams; Extract of Gentian, Saffron, and Juniper, each two Scruples and a half; Balſam Peru, two Drams and a half; Aloes eight Ounces; Diagridium prepared four Ounces and a half; Oil of Cloves three Drams: Pulverize thoſe Things that require it, and with a ſufficient Quantity of Syrup of Buckthorn make a Maſs of Pills for Uſe.

They anſwer the ſame Intentions with *Bennet*'s Pills deſcribed by Dr. *Fuller*; the inciding, attenuating, and reſolving Faculty of the Gums, *&c.* conjoyn'd with ſuitable Purgatives, imparts an admirable Efficacy to the Medicament in the Cure of ſundry chronical Diſeaſes, as the learned *Pitcairn* (to whom we are beholden for this Preſcription) found by proper Experience to be true; the one acting the Part of an Alterative or Preparative in correcting the Lentor and Viſcidity of the Juices (that might cauſe Obſtructions in the ſmall Veſſels and Glandules of the Viſcera) and thereby

thereby prepare and fit them for a due Expulſion; whilſt the other performs the Office of a Cathartick, in expurging and evacuating the ſame by ſuitable Diſcharges. "Whence, ſaith *Wedelius*, it "ought to be eſteem'd as a practical Rule, in Ob- "ſtructions of the Viſcera, that we muſt not only "open, but muſt alſo evacuate, in order to carry off "what is already prepared;" whereto it ſeems the famed *Sylvius* had an Eye, when he ſaid, "That "Purges are moſt conveniently preſcribed in the "Form of Pills, becauſe Gums are moſt eaſily put "in them, which are the fitteſt of all Medicines to "incide tough Phlegm." And thus at once the offending Humours may be both altered and expelled, without incurring the Hazard of raiſing any new Diſturbance in the Body; an Incident very common to hyſterical and hypochondriacal People, who very hardly bear any ſort of Evacuations without great Annoyance, which is here in great meaſure prevented by the ſtomachick and antihyſterick Ingredients, rendering the Compoſition very ſuitable for moſt Conſtitutions bordering upon a cachectick Habit, or low, flatulent Diſpoſition.

Dr. Colebatch's *Styptick Powder.*

Take of Steel-filings a ſufficient Quantity; put them into a convenient Veſſel, and pour thereon as much Oil of Vitriol as will o'ertop them three or four Fingers breadth; let them ſtand in a gentle Heat while the Ebullition laſts, or until the Fermentation give over, at which

Time

Time the acid Spirit will become of a ſweetiſh Taſte; then decant off all the Liquor, and evaporate it over a gentle Fire to the Conſumption of one half; then add a like Quantity of the Sugar of Lead to it, which being well mixed, exhale all the Humidity with a moderate Heat unto a dry Powder: To be kept in a Glaſs cloſe ſtopt from the Air for Uſe.

This Powder, upon its firſt coming dry (ſaith *Quincy*) hath the exact Appearance of Dr. *Colebatch*'s famed Styptick: But if it be continued longer over the Fire, and the Heat raiſed more intenſe, 'twill turn red like the *Crocus Martis*; the Efficacy whereof the ſaid *Quincy* experimented upon a young Horſe wounded in the jugular Artery, from which there iſſued a moſt violent Flux of Blood; and in order to reſtrain it, he diſſolved ſome of this Styptick in a ſufficient Quantity of warm Water, wherein he moiſten'd a Compreſs or Doſſil made of Curriers Shavings, and applied it hard up to the Orifice of the bleeding Veſſel, tying it as faſt on as the Part would admit, and haltering up his Head to the Rack for ſixteen Hours ſpace, which then being taken off, not one Drop of Blood followed, the Part quickly incarning and cicatrizing afterward. But what need is there to have Recourſe to Inſtances, the component Materials ſufficiently declare its ſtyptick Virtue, which in my Opinion may be much augmented, by bringing it up to red Crocus or Calx of Iron; for, as *Boerhaave* rightly obſerves, the Colcocothar is ſtronger than the *Vitriolum Martis*,

Martis, from which it is prepared; the heavy acid Oil of the Vitrol, which imparts the Styptcity to the Medicament ſtill remaining (notwithſtanding the Force of Fire uſed in the Proceſs) united to it; whence it becomes a moſt powerful ſtyptick Remedy, that, as the ſaid Author truly remarks, will ſtop all kind of Hæmorrhages, being applied cloſe up to the Mouth of the ruptur'd Veſſel; and this more effectually (which truly is ſomewhat wonderful) if ſuffered to run *per deliquum* into a fat oleous Subſtance, call'd the *Ol. Martis per deliq.* whoſe Efficacy in conſtringing the Mouths of the bleeding Veſſels is more extenſive and forcible than the *Crocus Martis* itſelf: And therefore they greatly err who tell us that the Air deſtroys its Virtue; whereas the celebrated Author teſtifies the contrary. But in what Form ſoever it be kept or uſed, it looks like a very noble and uſeful Remedy; the Vitriol of Lead being (of itſelf) accounted a moſt powerful Styptick (coagulating the Blood in contact with it, and cloſing the Orifices of the injured Veſſels) comes in as a ſuitable Aſſociate thereto: From whence many uſeful Compoſitions may be formed, not inferior to the moſt famed Medicaments extant for this Uſe. The *Tinct. Antiphthiſica Williſii* made of Sugar of Lead and Salt of Steel diſſolved in *French* Brandy, may more readily and compendiouſly be prepared herefrom in the ſame Menſtruum; which then (as a learned and judicious Practitioner, from his own proper Experience affirms) is a more effectual Remedy for ſtopping an Hæmorrhage, than either the ſtyp-

tick

tick Tincture of *Helvetius*, or any other martial Preparation abſtracted from it, which admits not of the ſaid acid Spirit into its Compoſition.

Galen's *Reſtringent Powder.*

Take Frankincenſe an Ounce; Alloes half an Ounce: Make them into a fine Powder, and at the Time of Uſe mix therewith as much of the White of an Egg as will give it a melliginous Conſiſtence; adding thereto a little of the fine Down of an Hare cut ſmall, and make a Mixture. Apply it upon ſuitable Compreſſes (or Doſſils) to the Orifice of the bleeding Veſſel, ſecuring it on with convenient Bandage, as uſual in theſe Caſes.

" This Medicine (ſaith *Galen*, *Lib.* 5. *Meth.* 4.) " I uſe many Ways, according to the different " Temperature of Bodies; the ſoft and humid " requiring more of the Frankincenſe, as the hard " and dry a greater Portion of the Alloes: So that " the one of them ſhall be more aſtringent, and " the other by its Adheſiveneſs the more em- " plaſtick." With which View, *Vigo* and ſeveral other Practitioners have added thereto, the Powder of Bole Armoniac, Sealed Earth, Dragon's Blood, Maſtick, Sarcocolla, and ſundry other Ingredients, in hopes to augment the recited Faculties: Yet the accompliſhed Author tells us, that " Although there are many other Medicines which " have an emplaſtick and aſtringing Virtue, with- " out Acrimony, yet there is none that doth ſo " incarnate;

" incarnate; for I am perſuaded that it excels all " others: And I ſhall marvel if any Man be able " to find a better. Therefore (ſaith he) I uſe it " always in the Pannicles or Membranes of the " Brain, and alſo in Wounds of the Neck, yea, " of the jugular Veins themſelves; inaſmuch as " it ſtoppeth the Flux of Blood in them, and " that without Binding." The Efficacy and Certainty whereof, *Scultetus* was well apprized of, when treating of the Wounds of the temporal Muſcles, he affirms them to be moſt dangerous, by reaſon of the Flux of Blood flowing from the inciſed Arteries, which ſometimes can ſcarce be ſtopped by the moſt powerful Remedies. " In which " Caſe (ſaith this judicious Perſon) I have found " nothing better than *Galen*'s reſtrictive Mixture, " (whoſe Encomium is well ſet forth by *Zac. Luſitanus* in his *Prax. Med. admirand. Lib.* 1. *Obſ.* " 85.) made of Alloes, Frankincenſe, Hare's " Down, moſt exactly powdered and mixed with " the White of an Egg, wherewith the Wound " is filled to ſtop the Arteries: But if the Bleeding be not ſuppreſſed by this moſt precious Remedy, four Grains of the *Spernioli Comp. Crollii* " may be given with good Succeſs, and about the " Neck an Emplaiſter may be applied, (of which " *Jonſton* makes mention in his *Idea Medicinæ*, " *cap. de Hemorrhag. Narium)* made of Fornace-" Clay and ſharp Vinegar of Roſes, ſpread upon " a Rowler four Fingers broad, and renewed as " often as it dries on, until the Flux of Blood " ſtop, which for the moſt part is effected in half " an Hour's Space, or ſooner, to a Wonder. I " thought

" thought good (ſaith our well-experienced Author) " to take Notice of theſe three Remedies, " becauſe they ſtop not only an Effuſion from the " temporal Arteries, but alſo all other deplora- " ble Hemorrhages of the adjacent Parts."

An Eſcharotick Powder.

Take Cypreſs Vitriol two Ounces and a half; Frankincenſe two Ounces; Alloes and dried Glue, each an Ounce; Arſenick half an Ounce; Gypſum finely powdered, twenty Drams: Mix and make a Powder, to be applied upon a ſuitable Tent or Doſſil, to the Orifice of the bleeding Veſſel.

This is deſcribed by *Fabr. ab Aquapend. Pentateuch. Chirurg. Lib.* 2. *cap.* 10. for reſtraining a violent Hemorrhage of the Arteries. The Vitriol and Arſenick, he tells us, are aſtringent Cauſticks; the Frankincenſe, Glue, and Alloes, are emplaſtick; and the Gypſum aſtringent: The Alloes alſo partake in this latter Quality, to augment which, ſome Practitioners add a ſuitable Quantity of the *Sang. Draconis*, and *Succ. Hypociſt.* ſo that from the whole, we ſhould hope for a Medicament of ſingular Virtues, enjoying all the Qualifications requiſite for this Work: Yet for all this, I ſuſpect the Goodneſs of the Medicine, from the Arſenick that is in it, whoſe poiſonous Salts I fear cannot be ſo well guarded by the viſcid Particles of the gummy Bodies, but that they will be ready to exert their Virulency, and manifeſt their deleterious and

and maligh Quality, by a ſucceeding Train of direful and deadly Symptoms, and this without effecting the propoſed End. For as *Fernelius* rightly teſtifies, although the arſenical Septicks are vehemently hot, yet are they neither cauſtick nor eſcharotick, ſo as to induce a Cruſt upon the naked Fleſh; but by a Quality altogether malign and venenate, they corrupt the Subſtance of the Parts, and bring it into a cadaverous Putrefaction: Therefore dangerous is their Uſe, and wholly unneceſſary in Surgery, ſeeing they are pernicious without Profit; for they neither burn nor induce a Cruſt, as the Cauſticks and Eſcharoticks do, but corrupt, and leave the Part to be cut off by Art. And for that Reaſon ought to be exterminated and baniſhed the Republick of Medicine. Of the ſame Mind were *Fabr. ab Aquapendente* and *Glandorpius*, with ſeveral other eminent Artiſts, who have proteſted againſt their Uſe, affirming them to be more dangerous than a Gangrene, and more to be dreaded than a Dog or a Serpent; inaſmuch as they are altogether adverſe to human Nature, and in Effect no leſs dangerous and deadly than the other; which might be confirmed by ſeveral fatal Examples, and therefore wherever their Uſe ſeems to be required, the actual Cautery (in thoſe deſperate Caſes) hath by the univerſal Conſent of the Learned the Preference on all Accounts: For the ignited Inſtrument leaves no ill Quality, as *Hildanus* witneſſeth; but the potential (and eſpecially the arſenical) leaves a corrupt Moiſture behind. 2. The Action of Fire is determined, but the other not. 3. The actual Cautery

Cautery operates in a Moment ſafely and effectually; the potential, contrariwiſe, more ſlowly and uncertainly, and the arſenical worſt of all. 4. The hot Inſtrument conſumes ſuperfluous Moiſture, but the Septick induces a putrefactive Humidity in the higheſt Degree. 5. By the ſame Quality the one dries and corroborates the Tone of the Part, the other humects and quite deſtroys it. 6. The Operation of the actual Cautery is leſs painful than the other, the former being momentary, the latter more permanent and durable; for which Cauſe, the ſaid learned and well-experienced Author paſſeth this definitive Sentence, that the ignited Inſtrument is deſervedly preferred to the potential one; but as for Arſenick, it can neither ſafely be applied alone in Powder, as *Fallopius* teaches, nor mixed with any other Medicine. For *Galen* reckons it amongſt Things ſeptick, and ſuch as have a putrefactive Faculty; whence I wonder what came into the Head of that ancient Surgeon Mr. *Gale*, when he ſo highly commended his cauſtick Powder made of Allum, Frankincenſe, Arſenick, Quicklime, *&c.* for reſtraining the Hemorrhage of an amputated Member; ſaying, "I have found this Medicament to "be the ſureſt of all others, not only in the re-"cited Uſe of Amputations, but alſo in many o-"ther Griefs cured by the Art of Surgery." Yet ſaving his Credit, I ſhould be loth either to try the Experiment my ſelf, or recommend it to others upon any Account; although we want not ſufficient Authorities to patronize theſe dangerous Proceedings. But *Hildanus* cautions us againſt giving

ving Ear thereto, ſaying, " Have a Care you do " not uſe *Fredo*'s Medicines for a Canker, for " they conſiſt of Arſenick, and that Arſenick is " a deſtructive Medicine in cancerous Affects, is " certain." Therefore *Penotus* muſt not be hearkened to, who *Lib. de Vera preparat. & uſu Med. Chym.* extols his Medicine made of Arſenick to the Skies. But he, good Man, was deceived by others, and never made Trial of it himſelf; as neither did *Philip Mullerus* of his, which he deſcribes in *Myſter. & Mirac. Chym.* The ſame Caution ſtands in Force againſt the *Pulv. ſine Pari*, and other arſenical Preparations deſcribed by ſundry Authors for this Intention. A Detail of ſome of the Symptoms, may be fetched from the Obſervations of *Riverius*, communicated by D. *Sam. Formius*, who gives us the Hiſtory of a Woman fifty Years old affected with a Cancer in her Left Breaſt, which was cured with a cauſtick Medicament prepared of Sublimate, Arſenick, Sal Armoniac, and Aqua Fortis, by Diſtillation; but upon the Application of the Medicine (ſaith the Author) a Fever aroſe, with Vomiting, Diarrhæa, and Excretion of Urine, which Symptoms remained for two or three Days; Nature being irritated by the deleterious Quality of the venenate Medicament. Thus have we an Account of the frightful Accidents attending the Uſe of this arſenical Compound, which may be ſufficient to deter all young and unexperienced Practitioners from medling with ſuch dangerous Edge-Tools: For probably, if the Patient had not been of a ſtrong Habit of Body, ſhe had periſhed under the Complication

plication of ſo many Evils attending at one Time, which ſeemed rather as ſo many Harbingers of approaching Death, than Forerunners of a ſucceſsful Event. So that we may venture to affirm, in the Words of *Hippocrates*, that it was *Experimentum periculoſum & judicium difficile*; but as it happened better than was likely, 'twas then *melius quam nullum.*

Fernelius's Powder of Lead.

Take thin Plates of Lead, and cut them into very ſmall Pieces, macerate them in moſt ſharp Vinegar for three Days, (changing it once a Day) then pour off the Liquor, and dry the Lead by the Fire, without burning; afterwards pulverize the ſame in a Mortar by continual rubbing, until it becomes a moſt ſubtil and impalpable Alchohol.

The Virtues of this Powder are thus delivered by its celebrated Author. "Seeing (ſaith he) the "leaden Plate is ſo exceedingly commended, not "only for healing ſimple, but alſo malign and "cancerous Ulcers; and alſo inducing a Cicatrix, "I would not conceal the Manner of making the "Powder of crude Lead, whoſe Force and Efficacy is much greater in all the recited Intentions: Being ſprinkled on the Surface of malign "Ulcers, it mildly, and without any Senſe of "Pain, corrects their Virulency, and brings them "to a ſpeedy Cicatrix, performing many greater "and more excellent Things."

The ſame (in reſpect of the epulotick Faculty) may be expected from the burnt Lead, and ſeveral other of the mineral, foſſil, and alkaline Tribe, diveſted of their Acrimony; an ample Catalogue whereof, may be met with in *Lib.* 1. *cap.* 10. of this Work, to which I refer the Reader.

Our Styptick Powder.

Take Colcothar of Vitriol four Ounces; crude Vitriol and Allum, each an Ounce; Bole Armoniac two Ounces; Sealed Earth and Dragon's Blood, each half an Ounce; Alloes, Frankincenſe, and dried Glue, each two Drams: Mix and make a Powder.

Another.

Take Allum and Vitriol, each an Ounce; Frankincenſe and Alloes, each half an Ounce; Fine Bole three Drams: Mix.

They are both approved Stypticks, void of any noxious Quality; the Vitriol and Allum, as *Wedelius* rightly obſerves, have an aſtringing and conſtipating Faculty, as the others are wholly emplaſtick; which two Faculties being united, form a Medicament of moſt admirable Virtue and Efficacy for this Intention, the one conſtringing and purſing up the Mouth of the bleeding Veſſel, whilſt the other not only abates the Pain ariſing from the Acrimony of the vitriolick and alluminous Particles, but alſo therewith retains them (by

(by their Adheſiveneſs) longer and firmer up to the Part affected; which Thing *Galen (Therapeut. 5. cap. 4.)* ſpeaks of as very profitable; for Fleſh, ſaith he, groweth underneath it, and is made as a certain Covering to the wounded Veſſel: Whence he recommends for this Uſe, the Powder of Chalcitis, Miſy, and Vitriol, either crude or burnt; but rejects the *Calx Viv.* wanting this latter Quality, which makes the Eſchar it produces fall off ſooner than is requiſite, and thereby expoſes the Part to a freſh and far greater Eruption or Hemorrhage. Of the ſame Nature and Quality is the following

Styptick Tincture.

Take common Allum one Pound; Alloes Succotrine one Ounce; Cochineal two Drams: Bruiſe the Ingredients apart, and boil them in Spring Water, eight Pounds, to the Conſumption of a third Part; then remove it from the Fire, and when cooled decant off the Liquor for Uſe.

This is no leſs effectual than the other, ſaving the ſmall Difference that may ariſe between a ſolid and a liquid Form. To render it therefore more powerful and certain in Operation, it may not be amiſs to arm the Doſſil or Pledget moiſtened herein, with a little of the foregoing Powder, or in Defect of it the Crocus of *Sal Martis*, (highly calcined) the camphorated Vitriol, or the vitriolick Soot, (ſcraped off the Bottom of a braſs Kettle)

may ſucceſsfully ſerve the Turn; as Dr. *Willis* moſt rationally hath adviſed: Who from his great Experience and Judgment affirms, that among Liquids, a Solution of Vitriol made in common Water, is not only the chief, but may ſerve for all the reſt. Some (continues he) commend it for a great *Arcanum*, and moſt certain Blood Stancher; and truly if applied to a green Wound, inaſmuch as by its Corrugation it cloſes up the Extremities of the lacerated or wounded Veſſels, it powerfully ſtops the Bleeding, and afterward by its vulnerary Quality heals them. Many noted Inſtances or Examples of its Efficacy this Way, might be produced from my own and others Experience, which for Brevity Sake muſt now be omitted; only this farther I muſt obſerve, that a little Powder of Vitriol, or a Portion of its acid Spirit, may ſometimes, when the *Occaſio præceps* is very urging, be commodiouſly added, in order to increaſe its Stypticity, and render it thereby more effectual for the deſigned End.

A green Vulnerary Tincture.

Take *Roman* Vitriol half an Ounce; dried Liquorice an Ounce: Boil them in three Pints of Water, till one be conſumed; then ſtrain off the Liquor, and reſerve it for Uſe.

This vulnerary Lotion (like the foregoing) is kept as an *Arcanum* or *Noſtrum* in ſome Shops, the Liquorice coming in as a Corrector to the Vitriol, ſerves by its glutinous and viſcous Particles to guard

guard off the vitriolick Salts from too much irritating the ſenſible Fibres; whereby it becomes ſofter and eaſier to thoſe tender Bodies, without deſtroying the operative Faculty of the Medicament; which, as its principal Ingredient declares, is chiefly deſigned for preventing and repreſſing the Growth of looſe, fungous Fleſh, in Wounds and Ulcers, hardening the incarned Subſtance, and rendering the Superſtructure more firm and ſtable: It likewiſe ſomewhat moderately deterges, yet not ſo much as might be expected from the Acrimony of the Vitriol, the Aſtringency therein reſiding, fruſtrating that Intention: But as it ſtops the excretory Ducts and Pores, and by that Means hinders the Generation of new Matter, and conſequently keeps the Ulcer clean, and in good Order, (eſpecially in firm, compact Habits, that can well diſpenſe with the ſtronger Medicines; for in others of a contrary Temperament it would rather prove colliquative or catheretick) it may be ſaid to act in ſome Meaſure the Part of a Mundificative or Deterſive, and finally perform the Duty (if not of an Incarnative, yet) of a tolerable good Epulotick, under the recited Reſtriction.

Tincture of Gum Lacca.

Take Gum Lacca an Ounce; Myrrh, Sarcocolla, each half an Ounce; Salt of Tartar ſix Drams: Powder them very finely, and expoſe them all Night in an open glazed Veſſel, to the Air; then evaporate the aqueous Particles with a ſoft Fire to Dryneſs, and beat the Maſs into a moſt

ſubtil Powder, upon which pour rectified Spirit of Wine, one Pound four Ounces: Let it ſtand in a digeſting Heat, until the Tincture be wholly extracted.

This reſinous Tincture of the ſarcotick Gums being a Sort of compound liquid Varniſh, of a glutinous and adheſive Nature, and dry warming Quality, is a moſt excellent Dreſſing for Wounds of the membranous and tendinous Parts; whereto a little Camphor may commodiouſly be added, on theſe Occaſions, in order to reſuſcitate the languid Heat of the cold ſimilar Bodies, and alſo exſiccate or dry up the excreted ichorous Humour, whilſt the gummy Particles falling in therewith, perform the Office of a Varniſh to the ſubjacent Parts, and by that means preſerve them from the Annoyance of the external Air in dreſſing: And with the ſame View it may be applied to the Surface of a naked Bone, when robbed of its *Perioſteum*, where the Gleet diſtilling from the neighbouring Bodies would neceſſarily foul it, if not timely prevented by the Aſſiſtance of ſome ſuitable balſamick and glutinous Remedy; and this more eſpecially where the Heads of the Bones are affected with a Wound or Ulcer: For there the Tendons of the Muſcles expand themſelves, and form an *Aponeuroſis* or nervous Covering, for the Juncture of the ſaid Parts; from whence, together with the Ligaments or Glandules ſituate thereabouts, iſſues continually a *Synovia* or Joint Liquor, that would inevitably bring on the recited Inconvenience: To obviate which, no better Remedy can be found, inaſmuch

as

as it not only dries and diſcuſſes ſuperfluous Moiſture, but likewiſe glues up the Orifices of the ſecretory Conduits, and prevents their doing any farther Injury. And herein I think it takes Place of the famed Tincture of Myrrh, as being more viſcous and adheſive, whereby it ſticks more pertinaciouſly and durably to the Part (even till Nature hath form'd a Covering for it) and further goes on with the Work of Incarnation as ſucceſſfully and ſpeedily as moſt other Medicaments we meet with of the like Form and Quality. And laſtly, where the Surface of the Bone hath actually received a ſmall Taint or Caries, I ſee nothing hinders it from becoming a pretty good Diſquammatory, unleſs the glutinous Contexture of the Ingredients prove too groſs and unactive; and therefore in ſuch Caſes the following Tincture may be more conducive.

An Exfoliating Tincture.

Take Gum Euphorbium one Ounce; Maſtich half an Ounce; Spirit of Wine tartariſed one Pound: Digeſt them in *Balneo m.* to a Solution of the Gums; then decant off the clear Liquor for Uſe.

This compound Tincture of Euphorbium may with leſs Pain and Caution be applied to a carious Bone, than either the Powder of that Gum, or the ſimple Tincture extracted from it, whoſe exceeding Pungency and Acrimony (as it is hot in the higheſt Degree) muſt neceſſarily render it

it very ſharp and ſtimulating, when uſed without its due Corrector; and therefore the ancient Phyſicians always adviſed the adjacent Parts to be guarded with Liniments, leſt by touching the Fleſh it might excite Pain, Fluxion, and Inflammation upon the affected Member. But theſe Inconveniencies are in a great meaſure prevented by the Addition of the Maſtich, which *Heurnius* looks upon as its proper Corrector to infringe and as it were ſheath the Aſperity of its pungent and fiery Salts, without deſtroying the diſquammatory Faculty and Efficacy of the Medicament. To obtain which in its full Perfection, 'twill be neceſſary to grind the Ingredients with a ſufficient Quantity of Salt of Tartar (the Night before, as lately directed in the preceding Proceſs) or malax them with a Portion of its Oil run *per deliq.* into a ſoftiſh Paſte; then being dried and pulverized, it may be committed to the Menſtruum under the foregoing Directions; for by this means the cloſe Contexture of the gummy Bodies (and eſpecially the Maſtich, that with great Difficulty emits its Tincture to a vinous Spirit) will be open'd and more diſpoſed to communicate their ſolutive Particles to the rectified Alchohol, which otherwiſe could not be purchaſed under a great Expence of Time and Trouble, as *Boerhaave* moſt frankly hath informed us.

The Virtues and Uſes are the ſame with the ſimple Powder and Solution of that Drug, whoſe Efficacy in ſcaling a corrupt and putrid Bone is not much inferior to the actual Cautery; inſomuch that *Hildanus* hath placed it next the hot Iron;

Iron; becauſe, ſaith he, it is ſharp and hot in the fourth Degree, it dries up the Humours in the Bone, and beſides hath a peculiar occult Quality; and though I was deterr'd from uſing it a good while for fear of Pain and Inflammation, yet Experience taught me by degrees, that although it bite the Tongue and Noſe extremely, yet in Ulcers, though it be ſtrew'd on plentifully, it cauſes no ſuch Accidents: Therefore I uſe it with good Succeſs in the recited Affects; as did likewiſe *Fallopius*, who has expreſsly declared, that he never found any thing more excellent than Euphorbium, neither any Medicine that performed the Intention ſooner.

A Febrifick Tincture.

Take Powder of the Peruvian Bark four Ounces; Salt of Tartar four Drams; beſt Brandy three Pints: Digeſt them in a gentle Heat for ſeven or eight Days ſpace, often ſhaking up the Glaſs Body, until the Tincture be wholly extracted.

Another.

Take Powder of the Bark four Ounces; Snake-root three Drams; beſt Brandy and Rheniſh (or rough Red Port) each one Pound: Infuſe them for forty-eight Hours upon hot Aſhes, often ſhaking the Bottle; and laſtly, decant off the clear Liquor for Uſe.

Upon

Upon the Magma of each Proceſs, freſh Wine or Brandy may be poured (but in leſs Quantity) for a ſecond Digeſtion, which will alſo require ſomewhat a longer Time to perfect it; and therefore 'tis better to keep the Tincture upon its Powder during the Time of Uſe, than decant or clear it off after the uſual Manner.

Theſe are two excellent Preſcriptions for intermitting Fevers, wherein the Bark is concealed from the Eyes of the Vulgar, who generally (and without Reaſon) are prejudiced againſt the Uſe of that moſt admirable Drug; from which, as the learned and well-experienced *Sydenham* teſtifies, he never ſaw nor could ſo much as rationally ſuſpect any Miſchief to enſue. "For could I (ſaith he) be "as well aſſured of the Duration of its Effects, as "I am of its Innocence, I ſhould make no Scruple "to give it the principal Place among all Medi-"cines that are yet extant; for it is not only found "to be of moſt excellent and incomparable Virtue "in the Cure of theſe (*i. e.* intermitting) Diſeaſes, "but alſo in ſeveral others attending the Womb, "Stomach, and other Viſcera." So little Reaſon hath any one to complain of the Unwholſomeneſs of it, provided it be rightly and duly adminiſtred; "For then, ſaith the famous Dr. *Morton*, 'tis an u-"niverſal Febrifuge, that perfectly, quickly, ſafe-"ly, and happily cures all intermitting and remit-"ting Fevers, in every Age, Seaſon, and Tempe-"rament." So that from henceforth there is no need for Phyſicians to trouble their Heads in ſearching out other Febrifuges, the Bark performing all that is required of them; and that with more

more Certainty and Succeſs than all the reſt of the Claſs put together; for this excites no febrile Ferment in the Blood, neither expels the ſame by Sweat or any other ſenſible Evacuation, that might impair the Tone of the Solids or Fluids, which thoſe on the other hand are too chargeable with, rendering thereby the Cures attempted of old ſo often tedious and unſucceſsful. Before the Efficacy of this moſt noble Antidote was found out, whereof many artful and elaborate Compoſitions have been invented, either to diſguiſe it or render it more effectual; yet none of theſe tedious Proceſſes have contributed any thing to the latter Deſign, the Bark in Powder alway anſwering the Intention better, than either its Decoction, Infuſion, Tincture, Extract, or any other Form prepared of it. But inaſmuch as ſeveral Perſons cannot bear it in its proper Subſtance, or through Prejudice and Averſion, will not admit of it; the foregoing Tinctures (amongſt other various Preparations) were properly deviſed; the former being the hotter of the two, muſt be diluted with ſome ſuitable Vehicle, before it can ſafely be adminiſtred, leſt by the Heat of the Brandy a freſh Tumult be ſtirred up in the Blood; whence a Delirium, Fever, and other bad Accidents, might probably be occaſioned; as the famed *Sylvius*, upon this Subject, wiſely hath remarked, who adviſes all ſpirituous Liquors to be given with great Circumſpection, telling us, "That "it is not convenient to give Spirit of Wine, and "the like inflammable Bodies, to all ſorts of People; "for they cannot ſafely be adminiſtred to any, but "ſuch

"ſuch only as are troubled with ſome grievous "Cold;" whence he concludes, that diſtill'd Vinegar, or other Acids, ought to be mix'd therewith in order to contemperate both the Heat of the Medicine, and that of the Diſeaſe. But amongſt all the acid Claſs, I ſhould (with *Riverius*) rather prefer the Spirit or Oil of Sulphur *per Campan.* for theſe Uſes, by reaſon it not only abates the Heat and Thirſt, but alſo imparts a better Conſiſtence to the Medicament, and enables the Liquor or extracting Menſtruum to receive a greater Portion of the Cortex into its Pores, than poſſibly could otherwiſe be effected; and therefore in lieu of the Salt of Tartar, a ſuitable Quantity of that acid Spirit may not improperly be ſubſtituted, whereby the Medicine will become more grateful to the Patient, and alſo more efficacious in cutting and diſſolving the viſcid and fizy Juices; and with the ſame View, the recited *Sylvius*, in Conjunction with other Authors, preſcribes aromatick Bitters and volatile Salts, which, as he ſaith, will incide and reſolve the glutinous Lentor as well as acid; hence comes the Virginian Snake-root to advance both the Credit and Virtue of the Bark, and therewith remove the Opprobrium that (through ſome ſmall Failure, probably owing to the Irregularity or bad Habit of the Patient, together with the Intemperature of the Seaſons, and the like Circumſtances thereon depending) was caſt upon it; which now is happily obviated to the great Benefit of Mankind, as innumerable Inſtances of late have ſufficiently confirmed unto us, and it ſeems was not unknown in the Time

of

of Dr. *Bates*, who hath given us a Preſcription chiefly conſiſting of theſe two Ingredients under the Title of a certain febrifick Powder, whereto the ingenious Dr. *Wainwright* had an Eye, in the Cure of his Patient, who, as he tells us, was almoſt worn out with a Quartan Ague; yet this obſtinate Diſtemper was at laſt happily removed and exterminated (after many fruitleſs Attempts) by taking only two Ounces of the *Cort. Peruv.* with a good Quantity of the *Rad. Serp. Virg.* added to it. By which, ſaith our Author, both its heating, cordial, and diſſolving Properties, were encreaſed, and conſequently rendered more extenſive to ſundry other obſtinate and chronical Diſtempers; as may be ſeen by the Account Dr. *Fuller* gives of his Peruvian Epileptick Electuary, wherewith this latter Febrifuge Tincture exactly correſponds in Virtue, and is a Remedy no leſs effectual for eradicating the moſt inveterate and habitual Agues, with all the whole Tribe of Intermittents, than for rooting out the epileptick and hyſterick Diſeaſes for which the learned Author accounts it a Specifick. So that from hence we may lawfully conclude, having Experience, Reaſon, and the Teſtimony of the Learned to witneſs in our Behalf, that the Cortex is, in the Cure of theſe Diſtempers, and moſt others, whereever an Intermiſſion or Remiſſion appears, the only ſafe, certain, and ſalutary Medicine, that either Art or Nature hitherto hath produced (or at leaſt made known) whatever ſome ſelf-ended Perſons, in favour of their purging, and anodyne

ſweating

ſweating Noſtrums (often more pernicious than the Diſeaſe itſelf) may ſay to the contrary.

Vigo's *Troches de minio.*

Take Crumbs of unbaked and well leavened Bread four Ounces; corroſive Sublimate one Ounce; Minium or Red Lead half an Ounce: Beat them altogether (with a little Roſe-water, if Need be,) and form thereof ſmall Troches in Shape of a Pine-nut, which dry in a warm Oven upon a Tile or Earthen Diſh, until they become hard and fit for Uſe. Keep them in a warm dry Place from the Air.

Troches ſine Pari.

Take Melilot Plaiſter two Ounces; corroſive Sublimate in Powder one Dram: Melt the Plaiſter over the Fire, and mix therewith the Sublimate; then dip a ſuitable Sponge therein, and preſs it hard together, whilſt it is yet warm, after the uſual Manner of preparing the common Sponge Tent, which may be cut into a convenient Form and Size, at the Time of Uſe.

They are both cauſtick and eſcharotick Medicines, the former having the greater Proportion of Sublimate in its Compoſition, is a very painful and dangerous Remedy, ſeldom or ſcarce ever made uſe of, except upon ſome extraordinary Occaſion,

caſion, where the milder Medicaments will not take Place; as in violent arterial Hemorrhages, large fungous Excreſcencies, obdurate Calloſities, old fiſtulous Ulcers, and the like inveterate Affects, wherein it may be ſaid to act as powerfully (in repreſſing the one, and extirpating the others) as the actual Cautery it ſelf; but with this Difference, that the latter induces no bad Symptoms, is quick and eaſy in Operation, and ſafe and certain in its Effect; whereas the ſublimate Preparations are always attended with unſupportable Dolor, Anxiety, Fever, Spaſms, and other Accidents of uncertain Event, and, like the poiſonous ſeptick Tribe, are of unlimited Proceeding, waſting the Solids, and deſtroying the Texture of the Parts more than is required: Which *Fallopius* obſerving, pronounced them utterly to be deteſted. The latter Preſcription being ſomewhat milder, may ſucceſsfully enough be uſed to conſume the Calloſity of annual and fiſtulous Ulcers, make Way to a carious Bone, and perform ſeveral the like Effects, due Regard being had in the mean while to the adjacent Parts, as is uſual in this Sort of Applications, which if not provided for (and guarded againſt) by ſuitable Defenſatives, and ſuch like cooling Topicks, Pain, Fluxion, and Inflammation, muſt neceſſarily enſue, from the Irritation of the cauſtick and fiery Salts, whoſe tragical Performances are (I fear) too often experimented by the unwary and raſh Practitioners.

Dr. Read's *Unguentum Baſilicon.*

Take Wax, Roſin, each ſix Ounces; Ship Pitch four Ounces; Gum Elemi two Ounces; Oil Olive five Ounces and a half; clear Varniſh four Ounces; Sheep's Suet two Ounces; Turpentine two Ounces and a half; Powder of Olibanum and Myrrh, each an Ounce: Mix and make an Unguent.

This magiſterial and compound Baſilicon, upon the Account of the ſarcotick Gums and Varniſh, is much ſuperior to the old ſtandard Medicament of the Shops; bearing the ſame Denomination, and might yet be improved, if, inſtead of the black Pitch, the Burgundy was ſubſtituted, whereby it would become ſomewhat more deterging, and prevent the Growth of looſe Fleſh, while the Incarnation is going forward: For which Intention it ſeems to have as much Reſpect as that of the Digeſtive, and with the Help of a little red Precipitate, (as commonly uſed) it may ſerve even through the whole Stage of Cure in ſimple Ulcers.

A Sarcotick Unguent.

Take Gum Elemi two Ounces; Venice Turpentine four Ounces; Powder of Myrrh, Alloes, and Maſtick, each three Drams; Frankincenſe half an Ounce; Oil of St. John's Wort as much as will give it a due Conſiſtence.

The

The component Ingredients ſufficiently declare the Uſe and Virtues of the Medicament, without any farther Explanation.

Magiſterial Unguent of Tutty.

Take Oil of Roſes and of unripe Olives, each ſix Ounces; Oil of Myrtles and Populneum, each three Ounces; Leaves of Plantain and Garden Nightſhade, each two Handfuls: Cut the Herbs, and mix them with the Oils, *&c.* for eight Days Space, often ſtirring them well together; then ſtrongly preſs out the Liquor, adding thereto Wax, three Ounces: Diſſolve them over the Fire, and whilſt it is warm put in Litharge of Gold ſix Ounces; Ceruſs two Ounces; prepared Tutty Stone two Drams; burnt Lead one Dram and a half: Incorporate all well together in a leaden Mortar, by a continual Trituration, for two Hours Space.

This is a tedious and laborious Proceſs, and may be much ſhortened, without any great Detriment to the Medicine, by boiling the vegetable Juices in the ſaid Oils, unto a full Conſumption of the aqueous Humidity, (or the Herbs themſelves, with an Addition of Roſe Water, after the ſame Manner) then ſtrain off the Oil, and diſſolve the Wax therein, adding laſtly, the epulotick Powders, ſtirring all well together, until it be fully cold; which will anſwer the ſame Intention of drying and cicatrizing the Surface of an

incarned Ulcer, no leſs effectually than if prepared after the former Manner deſcribed by *Fallopius*, its Author; who aſſures us from his own great Experience, that 'tis the beſt Medicine he ever met with for this Deſign; and not much different in Virtue and Quality, is the following:

Epulotick Unguent of Fernelius.

Take burnt Lead waſhed, Pompholix, or Tutty Stone prepared and waſhed, burnt Braſs, and burnt Allum, in like manner waſhed, each an Ounce: Grind them in a Mortar, to a moſt exquiſite fine Powder; then with a ſufficient Quantity of Oil of Roſes and Vinegar, alternately added thereto, reduce them into the Form and Conſiſtence of an Unguent.

This Method is much the ſame as laid down by *Fallopius* in preparing his *Unguent. de Tutia magiſtrale*, (and the *Nutritum* of the Shops) from which it cannot be varied, like as in the foregoing, by reaſon the Wax that ſhould keep the heavy Powders from ſubſiding, is here deficient, and therefore conſequently muſt be perfected by due grinding in a Mortar, until the whole be incorporated into one homogeneous Form: Whereto, if a little *Lapis calaminaris* was added, it would become yet more effectual for drying and hardening the new-made Fleſh into a Cicatrix or ſkin-like Covering. For which, alſo, the ſaid Author commends a Mixture of *Calx Vivum*, often waſhed in Plantain or common Water, until it hath depoſited

ſited all its Acrimony; and then by adding as much Oil of Roſes as it can imbibe, 'tis to be brought into the due Form of an Ointment, by continual grinding, as afore-directed.

Etmuller, in Lieu of the *Ol. Roſar.* ſubſtitutes the *Ol. Lini*, (which I diſlike) and afterward tinges it with a little Bole Armoniac to a fleſh-like Colour, which in ſome Caſes (by virtue of the drying Quality of the Lime correcting the Greaſineſs of the Oil) may do well enough, yet in others 'twill be found partly deficient, the deſcribed epulotick Unguents being far more effectual in ſkinning over dyſepulotick and malign Ulcers. For which Uſe, the following *Unguentum de Calce Vigonis* is a moſt excellent Dreſſing.

Take Lime nine Times waſhed, and finely pulverized, two Ounces; Litharge of Gold and Silver, each three Ounces; Ceruſs two Ounces and a half; Tutty prepared, two Drams; Oil of Roſes one Pound fourteen Ounces; Calves Suet melted, eight Ounces; Juice of Plantain, Nightſhade, and Lettice, each four Ounces: Boil the Oil and Tallow with the Juices, until the aqueous Particles be wholly evaporated; then ſtrain and add thereto, Ointment of Roſes two Ounces and a half; white (or in defect of it yellow) Wax, as much as will be ſufficient to give it a due Conſiſtence; which being removed from the Fire, laſtly put in the ſaid mineral Powders, and make an Ointment, by continual ſtirring, until it be fully cold.

This (ſaith its Author) is good (not only for the recited Uſe, but alſo) for Burnings with Fire, Itchings, hot Ulcers, Bliſterings, Chafings, and ſundry other Maladies depending upon a hot or humid Intemperature.

Paræus's Ægyptiacum.

Take Verdigreaſe, Roch Allum, and common Honey, each three Ounces; ſharp Vinegar five Ounces; common Salt an Ounce; Roman Vitriol half an Ounce; corroſive Sublimate two Drams: Boil them together to a melliginous Conſiſtence, for Uſe.

This is abſtracted from *Vigo*, whoſe Preſcription runs after this Manner:

Take Verdigreaſe, Allum, Honey, and Vinegar, each two Ounces; Arſenick powdered two Drams, (which I would have omitted) Sublimate in Powder, one Dram: Boil them all together (the ſolid Ingredients being all firſt duly pulverized) to the Conſiſtence of new Honey; which reſerve for Uſe.

The recited Authors of theſe Medicaments, uſher them in with exceeding great Commendations; telling us (from practical Experience) there has not yet been found any Remedy more powerful and ſpeedy to hinder Putrefaction, if beginning, or correct it when preſent, than *Ægyptiacum*

cum augmented in Strength; for beſides many other Virtues which it hath, it conſumes and waſtes proud Fleſh, deterges the ſordid Matter, and corrects the Virulency of malign and eating Ulcers, and hinders their farther ſpreading and corrupting; and by virtue of its inciding and penetrating Faculty, having neither Oil nor Wax in its Compoſition, that might embarraſs and hinder the active Principles in their Operation; it readily interpoſes between the putrid and ſound Fleſh, and by making an Eſchar thereon, ſeparates the dead Part from the living, and by that Means, as *Vigo* truly obſerves, preſerves the whole from Corruption. And from my own Experience I muſt add, that although the Sublimate enters the Medicament in pretty large Quantity, yet could I never in theſe Caſes obſerve any ill Effect from it, nor that it produced any greater Pain than what is common to the *Ægyptiacum* of the Shops, and this not only in a Gangrene where the corrupt and dead Fleſh is imperceptible of all Senſation, but alſo in ſeveral other Caſes wherein no Symptoms of this Malady have been apparent: For the mildeſt *Ægyptiacum* applied to any ſenſible Part, cauſes a moſt acute and ſharp biting Pain of long Duration, unleſs it be adhibited ſcalding hot to cauterize the nervous Fibres, and render them incapable of Perception: And this which has the Sublimate in it does no more, when uſed after the ſame Manner, the cauſtick Faculty of that Medicament approaching the Nature of Fire, muſt conſequently make a readier Diſpatch of the ſenſitive Organs, than where the ſame is wanting;

and that more eſpecially when aſſiſted by a potential Heat. However, to prevent all Accidents, it will be highly neceſſary to guard the adjacent ſound Parts with ſome ſuitable and proper Defenſative, that may reſiſt the Pain, Fluxion, and Inflammation, the inſeparable Attendants of all acrid and corroſive Applications.

An Unguent for wounded or punctured Nerves.

Take Euphorbium in Powder one Scruple; Roſin and Turpentine, each half an Ounce; Wax, a little, *viz.* about half an Ounce: Mix and make an Ointment, to be ſpread upon Cloth, and applied warm to the Part affected.

This is taken from *Galen*, *6 meth.* 2. who made it much after one and the ſame Manner, *viz.*

Take Wax one Part; Turpentine and Pitch, each half a Part; Euphorbium finely powdered and ſifted, a twelfth Part: Mix them together, as the former, adding or ſubſtracting from the Quantity of the Euphorbium, according as the different Temperament of Bodies, and other Circumſtances, ſhall direct.

"By this Remedy alone, immediately adhibited, (ſaith the famed *Scultetus*) "I have moſt happily "cured very many Punctures of this Sort, (*i. e.* of the Nerves) "as many eminent Perſons can "witneſs." And *Galen* himſelf expreſly affirms, that no Man uſing preſently, at the Beginning, thoſe

thoſe Medicines of his Invention, (whereof this is one of the principal) ever fell into Convulſions. "For (ſaith he) I have truly noted where the "Nerve was, and how there muſt neceſſarily fol-"low greater Dolor than in other Parts; becauſe "it hath an acute Senſe of Feeling, and that con-"ſequently there follows an Inflammation, unleſs "ſome Means be uſed to aſſwage the Pain, and "hinder the Generation of it." For which End this great Phyſician did ſometimes (when the Euphorbium was dry) mix with it a little Oil, to make it of the Thickneſs of Honey. And *Ambroſe Paræus*, inſtead thereof, added Oil of Turpentine, (with a little *Aqua Vitæ.*) The Efficacy of that penetrating and ſearching Oil, (which was unknown to the Ancients) is well recorded by *Sylvius le Boe*, after this Manner: "A Surgeon (ſaith he) "of *Amſterdam* wounded the laſt Joint "of his Thumb with the Point of a Pair of Sciſ-"ſars, which he let fall out of his Hands; and "becauſe he felt but little Pain, he neglected it "for ſeveral Hours, even from Noon till about "ten at Night, at which Time he felt ſome ſmall "Convulſions about the punctured Part, and all "over his Body: His Convulſions and Pains con-"tinuing, he ſent for me (ſaith our Author) in the "Morning, and told me that he muſt die, be-"cauſe he never ſaw any one cured into whoſe "Wounds the Oil of Turpentine had not been "poured at firſt, which he had neglected becauſe "the Pain was not great. And it happened as "he had foretold, the Text of *Hippocrates* being "verified, *Convulſio ex vulnere lethalis eſt.*"

Whence-

Whence the ſaid *Sylvius* concludes, that when *Ol. Tereb.* does no Good, as being applied too late, 'tis in vain to hope for a Cure; a Remark worthy to be kept in Memory by all young Practitioners.

A Phagedenick Water.

Take corroſive Sublimate two Drams; grind it in a marble Mortar to a moſt ſubtil Powder, and gradually pour thereon two Pounds of ſtrong Lime-water, and put it into a glaſs Bottle for Uſe.

Some add two Ounces of Spirit of Wine in the Preparation, but as it is of little Moment to the Medicine, it may either be added or omitted, without any great Good or Harm.

The Sublimate here ordered, is in double Proportion to what it is in other Preſcriptions, and yet I always found it weak enough for what I deſigned it; the great Alteration that corroſive Medicament undergoes in the Proceſs, by virtue of the alkaline *Lixivium*, tranſmutes both its Form and Quality, and from a deadly and deſtructive Poiſon of the firſt Rank, makes it become a mild, ſafe, and very uſeful Remedy: And this is evident, from the Orange or Turpeth Hue which it puts on when firſt mixed with the Lime-water, ſhewing thereby its Change of Quality, and the Inoffenſiveneſs of its new Nature; which is farther proved by experimental Practice, even in internal Uſe, there being nothing more common amongſt ſeveral able and well-experienced Surgeons, than

to

to give two Spoonfuls of the decanted clear Liquor in the Morning faſting, either to promote or continue a Salivation at its due Height, and this with as much Safety and Succeſs as the beſt mercurial Remedy of them all. And truly I am apt to believe that the precipitated Powder it ſelf (for Sublimate I cannot call it now) may be ventured on as ſafely as the *Turp. min.* ſo much in Vogue. The Preparation of *Horſtius*, is only a Solution of corroſive Sublimate in boiling Water precipitated with *Ol.* ☿ *per deliq.* and afterward edulcorated by repeated Ablutions, and laſtly, the Proceſs finiſhed with a Deflagration of Spirit of Wine; and if the ſame Method was uſed here, of waſhing and burning off the ſaline *Spiculæ* yet reſiding in the yellow Powder, (which appears the very ſame with the other, upon its Precipitation with the alkaline Liquor) no doubt but we ſhould obtain (at far leſs Expence and Trouble) a Medicament not much inferior to that famed Remedy of the Shops. But that a ſimple Trituration (though never ſo long performed) ſhould of it ſelf break off thoſe ſaline *Spiculæ* that render the Sublimate ſo poiſonous and deſtructive, and thence reduce it into a mild and inoffenſive Nature, fit for internal Uſe, as a late Author ſuggeſts, is what I cannot believe, both Reaſon and Experience affirming the reverſe: For either the Force of Fire, or the Efficacy of an alkaline Menſtruum, ſuch as the recited, only hath Power to obtund the Aſperities, and alter the Nature of thoſe dangerous and active Bodies.

The

The Uſe and Virtues of this mercurial Lotion, are very extenſive and ſerviceable for many Caſes, removing all, or moſt cutaneous Diſorders, ſuch as the Scab, Itch, Herpes, and all tetterous and venereal Eruptions; it deterges Ulcers, corrects the Laxity of new Fleſh, takes down the luxuriant, and corrects the Virulency of cacoethick and malign Ulcers, and is accounted a Specifick in all the phagedenick and eating Kind, from whence it hath aſſumed this Denomination. The mercurial Precipitate, or yellow Powder, in the Bottom of the Glaſs, as it retains a Portion of its acrimonious Particles, may be uſed as a Catheretick to conſume fungous Excreſcencies, wear away Calloſities, and finally perform all the other Offices required from that acrid Claſs.

F I N I S.

INDEX.

INDEX.

BOOK I.

CHAP. I. *Repellents.* Page 1
——II. *Diſcutients.* 18
——III. *Emollients.* 35
——IV. *Suppuratives.* 49
——V. *Anodynes*, &c. 66
——VI. *The Apertion of Abſceſſes.* 85
——VII. *Digeſtives.* 98
——VIII. *Deterſives or Mundificatives.* 112
——IX. *Sarcoticks.* 125
——X. *Epuloticks.* 138
——XI. *Stypticks.* 151
——XII. *Agglutinatives.* 169
——XIII. *Catagmaticks and Diſquammatories.* 186
——XIV. *Pyroticks, their Sorts and Diviſions.* 206
——XV. *Revulſion and Derivation.* 239

BOOK

INDEX.

BOOK II.

Antimonial Æthiops. Page 257
Cinnabrine Æthiops. ibid.
Arcanum Coralinum *dulcified.* 262
Amalgama of Quickſilver with Lead. 264
Balſam agglutinative. 265
——*Anodyne arthritick.* 266
——*Spaniſh.* 270
——*Samaritan.* 273
——*Compound.* 275
——*Of* Vigo, *for wounded Nerves.* 276
——*Of* Schroder. 277
——*Vulnerary.* 279
Cautery Velvet, Paræus. 280
——*Ditto, from* Heurnius. 282
——*Another from* Guido. 283
Cataplaſm Repellent. 284
——*Anodyne reſolving.* 286
——*Diſcutient.* 287
——*Suppurative.* 288
Cerote Anodyne, refrigerative. 291
——*Defenſative.* 292
——*Emollient and Reſolvent.* 293
——*Suppurative.* 294
——*Of* Lapis Calaminaris. 297
——*Of* Gualter's, *for Fractures,* &c. 298
——*Of* Vigo. 300
——*Cephalick.* 303
Collyrium Repellent. 304

Collyrium

INDEX.

Collyrium discutient and detergent. Page 305
Electuary Hæmoptoick, Boyle's. 306
——*Catholick.* 309
——*Balsamick.* 310
Emplaister anodyne arthritick. 312
——*Adhesive.* 313
——*Of Betony.* 313
——*Carminative lateral.* 316
——*Discussive.* 317
——*Ditto with Mercury.* 319
——*Epulotick of Primion.* 320
——*To discover a Fissure in* Cranio. 321
Epithem Pleuritick. 330
——*Frontal.* 335
——*Cardiack.* 336
Fomentation vulnerary. 338
Gargle repellent. 340
——*Emollient.* 343
Liniment for Ambustions. 344
——*Discussive.* 348
——*Hæmorrhoidal.* 349
Lotion for a Gangrene. 350
Malagma epulotick. 351
Mixture digestive. 352
——*Ditto mundificative*, Paracels. 353
Pills odontalgick. 354
——*Hydragogue.* 355
——*Ecphractick*, Edenburgh. 361
Powder Styptick. 362
——*Restringent.* 365
——*Escharotick.* 367
——*Of Lead*, Fernelius. 371
——*Of Stypticks.* 372

Tincture

INDEX.

Tincture Styptick. Page 373
——*Vulnerary.* 374
——*Of Gum Lacca.* 375
——*Exfoliating.* 377
——*Febrifuge.* 379
——*Ditto, another.* ib.
Troches De minio. 384
——Sine pari. ib.
Unguent Basilicon magisterial. 386
——*Sarcotick.* ib.
——*Magisterial of Tutty.* 387
——*Epulotick,* Fernelius. 388
——*Ditto of Calx,* Vigo *and* Etmuller. 389
——*Ægyptiacum,* Paræus. 390
——*Ditto,* Vigo. ib.
——*For wounded Nerves.* 392
Water, Phagedenick. 394

MVSEVM
BRITAN
NICVM